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General Pre-established Harmony
A Study of Leibniz on Substance and the Unity of the World

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GENERAL PRE-ESTABLISHED HARMONY

A Study of Leibniz on Substance and the Unity of the World

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Thesis submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

Supervisor: Prof. Maria Rosa Antognazza

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Abstract

This dissertation offers an in-depth analysis of Leibniz's theory of pre-established harmony, understood as an explanation of the unity of all substances. I begin by arguing for a formulation of pre-established harmony as involving seven components, the conjunction of which constitutes the necessary and sufficient conditions of the theory (ch. 1). Next, I focus on Leibniz's reasons for each of the components disentangled in chapter 1, thus aiming to provide an account of the grounds of pre-established harmony (chs. 2–4). I explore and discuss in detail specific ways in which the pre-established harmony trades on doctrines pertaining to Leibniz's logic and philosophical theology. Taken as a whole, the discussions in these chapters are presented as a unitary argument against the view that the pre-established harmony is a mere corollary of Leibniz's complete-concept theory of substance and the predicate-containment theory of truth on which that theory rests. Finally (ch. 5), on the basis of the results obtained in the previous chapters, I develop an interpretation of the pre-established harmony which combines elements from Leibniz's metaphysics of nature and philosophical theology. It is argued that, understood as an explanation of the unity of the world, the pre-established harmony can be seen as an extension of, or conceived by analogy with, Leibniz's account of bodies as aggregates of simple substances endowed with perception. At the same time, I defend and motivate the view that, as a distinct type of aggregate, the world has, for Leibniz, the specific characteristic of being unified by the perceptual power of God. It is further argued that, so conceived, the world as an aggregate, unlike bodies as aggregates, has a unity and reality which, while relational, cannot be reduced to the unity and reality of the world-apart, perception-equipped substances it comprises. All in all, the general picture of pre-established harmony at which we arrive is thus one in which Leibniz's logical doctrines, his philosophical theology and his natural philosophy inform and complement each other in a rich explanation of the unity of the world as a metaphysically non-reducible aggregate unified by God.

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A Note on Citations and Translations

Abbreviations for primary sources, both editions and individual works, are listed in the Bibliography, Section I.1 (Leibniz) and Section I.2 (other authors). References to Leibniz's A are for the most part to series, volume and page(s), though on some occasions lines have also been given (e.g. A VI, 4: 1550, 8–11 = A's series VI, volume 4, page 1550, lines 8–11). References to GP, GM, Dut. and DS are to volume and page(s). References to all other primary texts are to page(s) unless obviously otherwise. Secondary sources are cited using the author–date system and are listed in Section II of the Bibliography. Mugnai's *Leibniz's Theory of Relations* (Stuttgart: Franz Steiner Verlag, 1992) is cited both as primary text and secondary source. Thus 'Mugnai + page' (e.g. Mugnai 155) is used to refer to Leibniz's writings reproduced in the book's Appendices (pp. 139–165), particularly Appendix 4 (*Notationes quaedam ad Aloysii Temmik Philosophiam* and *Marginal Notes and Remarks to Temmik's Text* [pp. 155–164]). Mugnai's study of Leibniz's theory of relations, which constitutes the body of his book (pp. 1–137), is quoted in the same way as all other secondary sources.

All quoted passages are given in English. I have tried to rely on available English translations as far as possible. When no English translation was available, I have provided my own. These (rare) cases can be recognised by the fact that the reference to a primary source is not accompanied by a reference to a corresponding English edition.

Introduction

Leibniz's major metaphysical argument for the theory of pre-established harmony hinges on his notion of substance.¹ Writing to Bossuet in 1694, for example, he says that the pre-established harmony 'is nothing but a corollary of the notion...of substance in general' (A I, 10: 143/WF 8). The same account is given in the *New Essays* of 1704 – 'harmony', Leibniz tells us, is 'a consequence of the nature of substances' (NE 379) – and some eighteen years earlier in a draft of his letter to Arnauld of 28 November/8 December 1686. Preparing his reply to Arnauld's request to cast light on 'the hypothesis of the concomitance and harmony between substances' (A II, 2: 95/LA 78), the first sentence Leibniz deemed pertinent to write is this: 'The hypothesis of the concomitance is a consequence of the concept I have of substance' (A II, 2: 111, 26/LA 84).

These passages leave no doubt that Leibniz's theory of substance is closely related to his pre-established harmony. But they offer us no clue as to how exactly the relationship between these doctrines is to be fleshed out. A number of scholars have claimed to find an answer to this question in Leibniz's view of substance as complete being possessed of an exhaustive and uniquely applicable concept – a complete individual concept – and the predicate-containment conception of truth on which that view rests.² Though he does not go

¹ Another argument is the so-called 'argument from elimination': there are three *prima facie* available explanations for the agreement between substances (and between the soul and the body), namely the pre-established harmony, occasionalism and interactionism. But, upon elaboration, occasionalism and interactionism are untenable. Given that these three options represent a mutually exclusive and exhaustive set of options, it follows that the only possible way of accounting for the agreement between substances (and between the soul and the body) is the pre-established harmony. See e.g. GP IV: 498–500, GP IV: 485–7. I shall not be concerned with this argument in this study. Detailed discussions of it can be found in Sleight (1990: 161–70) and Lodge (1997: 22–40). See also Russell (1937: 137, 264), Brown (1984: 164), Cottingham (1988: 145) and Rutherford (1993: 137, n. 5), by whom I have been helped in this footnote.

² Varying as to details and terminology, versions of this answer can be found in Couturat (1901: x–xi, 209), Couturat (1972: 19–26), Russell (1937: 10–11), Russell (1945: 592–3), Rescher (1967: 47), Broad (1975: 45), Loeb (1981: 277 ff.) and Brown (1984: 158). In fairness to these scholars, I should mention that not all of them are explicit in saying that the pre-established harmony as a whole follows from substances' property of conceptual completeness and the principle of predicate-containment. Yet all of them think that, on the basis of that property and principle, a satisfactory explanation can be given for Leibniz's thesis that, to put it roughly for the moment, every substance is the only (finite) cause of its own states – the spontaneity thesis. As Lodge (1997: 10) points out, given the centrality of this thesis to Leibniz's pre-established harmony, it is not unreasonable to think that, if one were able to find an explanation for Leibniz's endorsement of it, there would remain little more to do in order to understand his endorsement of the pre-established harmony.

into detail, the essentials of this answer were long ago delineated by Louis Couturat in his groundbreaking study, *La Logique de Leibniz*:

From this [*sc.* the principle of sufficient reason interpreted as containment of the predicate in the subject] Leibniz first deduces the principle of symmetry and the principle of indiscernibles, and then a series of metaphysical consequences: there are no purely extrinsic denominations; the complete notion of an individual substance involves all its past, present, and future predicates and consequently the entire universe; an individual substance exerts over all the others a physical action but not a metaphysical action, wherefrom the hypothesis of pre-established harmony follows (*d'où suit*). (1901: x–xi)

On this interpretation, then, the pre-established harmony is ultimately a development of Leibniz's logic, 'the centre and thread', in Couturat's words, 'of Leibniz's metaphysical speculations' (1901: ix). For this reason, I shall refer to it as the 'logician view' or by some other recognisably similar expression.

It is not difficult to see how the details of this view may be filled out. According to Leibniz's conception of sufficient reason, truth must be grounded on the analysis of concepts: in every true (affirmative) proposition, universal or singular, necessary or contingent, the concept of the predicate must be contained, whether expressly or virtually, in the concept of the subject (A VI, 4: 1515; A VI, 4: 1540; A VI, 4: 1646; A II, 2: 80). Now, this conception extends beyond the purely logical level of the structure of propositions, bearing important metaphysical implications. One of these implications is the definition of substance as being having a complete individual concept, the best-known instance of which appears in § 8 of *DM*: to be a substance is to be a being for which there is a concept whose understanding is sufficient for the deduction of all the predicates that can truly be predicated of that being (A VI, 4: 1540).³ From this, however, Leibniz extracts a second, equally significant consequence. As one might expect of someone for whom 'there is a perfect accord between thought and things, spirit and nature' (Couturat 1901: xi), the identification of completeness as the mark of substances' concepts dictates the way in

³ See also A VI, 4: 1618; A VI, 4: 1646. In his illuminating treatment of the relationship between the complete-concept theory and the predicate-containment account of truth, Rutherford persuasively argues that the former can only be seen to derive from the latter if Leibniz's commitment to nominalism is presupposed as an underlying premise (1995: 119–24, 138). For the sake of argument, however, here I shall assume that, as the quoted passages indeed suggest, the view of substance as being having a complete individual concept is a consequence of the containment theory of truth.

which the ontological correlates of such concepts are to be characterised: substances themselves are complete beings (A VI, 4: 1540).⁴ But if substances are complete beings which involve all their true predicates, then it seems natural to think that every substance is the sole (finite) cause of its own states and hence that no substance is externally dependent on any other (finite) substance.⁵ And that is, in short, what the theory of pre-established harmony asserts. So, that theory is a corollary of substances' property of conceptual completeness and thus an eloquent confirmation of how deeply Leibniz's metaphysics was anchored in his logic.

For all the influence it exercised on Leibniz scholarship during much of the twentieth century, it need hardly be said here that the main insight governing this view – what Couturat (1901: xi) called Leibniz's 'panlogism' – can no longer be regarded as an appropriate way of approaching Leibniz's philosophy in general.⁶ And yet, as far as the pre-established harmony is concerned, considerable support for it can be found in Leibniz's writings. This is how Leibniz explains his remark, in the quoted draft to Arnauld, that the hypothesis of concomitance is a consequence of the notion he has of substance: 'For in my view the individual concept of a substance embraces everything that is ever to happen to it' (A II, 2: 111/LA 84). Essentially the same position is found in the "Principia Logico-Metaphysica" of 1689 (A VI, 4: 1647)⁷ and, perhaps more tellingly, in §§ 14–15 of *DM*, the very sections of that work which Leibniz expressly devoted to the issue of the 'dependence' holding between substances.⁸

⁴ For similar transitions from the level of logical determinations to ontological ones, see e.g. A VI, 4: 1542; A VI, 4: 1507; GP VII: 316. For criticisms of such transitions, see Wilson (1986: 160) and Broad (1975: 24 ff.). For a reply to these criticisms, see Adams (1995: 79). We shall return to this topic in due course.

⁵ The derivation of the denial of intersubstantial causation from the affirmation of (the sufficiency of) intrasubstantial causation is indeed the inferential pattern that we find in *PL-M*, the text from which Couturat was drawing in the quoted passage. See A VI, 4: 1647. See also A VI, 4: 1551; A II, 2: 53. As we shall see later, the argument presupposes a rejection of causal overdetermination. In any case, in other writings Leibniz proceeds the other way around – from the denial of external causation to the affirmation of immanent causation. See e.g. NE 210, C 14.

⁶ For some remarks on this, see Gueroult (1967: 1–7), Mondadori (1975), Adams (1994: 175) and Rutherford (1995: 138 ff.). Pioneering works which, explicitly or implicitly, oppose the purely logical approach to Leibniz's philosophy characteristic of Russell and Couturat's (otherwise different) interpretations include Baruzi (1907), Grua (1953), Gueroult (1967), Heinekamp (1969), Mugnai (1973) and Mondadori (1975).

⁷ Formerly called "Primary Truths" (C 518–23) and dated by Loemker to ca. 1684 (L 267–71). Based on watermark evidence, the Academy editors have more recently proposed that this paper was probably not written until 1689. See A VI, 4: 1644.

⁸ See A VI, 4: 1551. See also A II, 2: 82, where Leibniz adds that, seen as a consequence of conceptual completeness and his *inesse* principle, 'the hypothesis of the concomitance or agreement...is even conclusive (*demonstrative*) and inevitable'. Cf. GP III: 144. There is reasonable agreement among commentators that

This dissertation has two overarching goals. The first is to provide a unified argument which, taken as a whole, can effectively supplant the logicist construal of the grounds of pre-established harmony by tracing its roots to a richer and much more complex set of tenets. Such an argument is predicated on the conviction that any plausible account of Leibniz's motivations for his pre-established harmony will have to do justice to the complexity of this theory, and the one-sided derivation scheme favoured by the logicist interpreter falls short of doing so. By this I do not mean to suggest that conceptual completeness and considerations of truth – the more markedly logical strand of Leibniz's metaphysics, as we may say – are unimportant to the pre-established harmony. The weight of textual evidence leaves it very clear that, at least during a significant period of his philosophical career, Leibniz's reflections on the structure and features of the actual world were largely shaped by his logical doctrines, and the pre-established harmony is no exception to this. Rather, my opposition to the logicist interpreter concerns the question of how fundamental and sufficient we should take these doctrines to be. To the logicist's mind, logic is the ultimate explanatory level to which the pre-established harmony must be wholly relocated. In this sense, her project is a reductionist project.⁹ On the view I shall develop, by contrast, logic is neither the only foot in which Leibniz's pre-established harmony stands, nor the most fundamental of its feet. As we will have opportunity to see, the pre-established harmony owes much more to Leibniz's theology and natural philosophy than to any of his logical doctrines.¹⁰ Part of my aim in what follows is to explore and discuss in detail specific ways in which the pre-established harmony – or, more precisely, each of the claims that, as I shall argue, compose this theory – can be seen to trade on doctrines pertaining to Leibniz's philosophical theology, his natural philosophy and logic.

But providing an account, detailed or otherwise, of the grounds of pre-established harmony is not of course the same as providing an account of pre-established harmony itself. The second aim of this dissertation is to offer an interpretation of this distinctively

DM §§ 14–15 is the first place in which Leibniz presented, in all its essentials but the name, his theory of pre-established harmony. See chapter 1, section 2.

⁹ For the characterisation of (what I called) the logicist view, particularly as it is exemplified by the works of Russell and Couturat, as 'reductionist', see Mugnai (1973: 43).

¹⁰ In different senses, the importance of theology to Leibniz's theory of pre-established harmony – or more generally to his doctrine of harmony – has been emphasised by other scholars. See especially Mugnai (1973), Rutherford (1995), Antognazza (1999) and Antognazza (2009b). I owe much of the original impetus for pursuing these topics to reading their works.

Leibnizian and, in the judgement of one prominent historical figure, *prima facie* ‘strange’ theory.¹¹ The central notion on which my interpretation is built is that of an aggregate. Considerations of aggregation pervade Leibniz’s anti-Cartesian project of laying the foundations for the (accidental) unity and reality of bodies, but I believe they are also integral to Leibniz’s articulation of his pre-established harmony as an account of the (accidental) unity and reality of the world as a whole. This is not how the pre-established harmony is usually presented. Nevertheless, that the world is an aggregate of finite substances is a claim Leibniz explicitly makes in more than one text. If the theory of pre-established harmony is primarily, as I believe it is, an account of the unity of the world, this claim establishes a very direct connection between that theory and Leibniz’s views on aggregation. Discussing and elaborating on this connection, along with a problem it poses for Leibniz’s conception of the unity of the world and a solution to this problem, form the other overarching objective which drives the investigation that follows.

In order to make their unity more visible, I have chosen to present my arguments in five consecutive chapters. Conceptually, however, they fall into three distinguishable parts. The first and third parts consist, respectively, of chapters 1 and 5 only. In between come chapters 2 to 4, which constitute the second part. In general, this triad of chapters focuses on, and is thematically unified by, the grounds of Leibniz’s pre-established harmony – the sources from which it is derived. Before we can examine this topic, however, it is obvious that we need a statement of the theory whose grounds we seek to establish. Such a statement I provide in chapter 1. In sum, I argue for a formulation of pre-established harmony as involving seven components: (C1) the relation of every substance to every other substance in its universe, (C2) God as the overall source of substances’ universal relatedness, (C3) the refutation of occasionalism, (C4) the rejection of substances’ reciprocal dependence, (C5) the affirmation of intrinsic causation or spontaneity, (C6) the construal of substances’ intrinsic causal powers as perception, and (C7) ontological pluralism.¹² This formulation allows us to address the topic of the grounds of pre-

¹¹ This is Kant’s judgement, who describes the pre-established harmony as the ‘strangest figment ever to be excogitated by philosophy’ (Ak XX: 284/AH 374).

¹² I will provide a more accurate statement of some of these ideas at the end of chapter 1, where I will also give my reasons for seeing them as proper components of pre-established harmony.

established harmony in chapters 2 to 4 by concentrating on Leibniz's reasons for its components. And that is what we do in those chapters.¹³

Chapter 2 focuses on (C1) and (C4). Generally put, my suggestion is that, as far as these components go, a fairly clear and complete explanation of Leibniz's reasons for the pre-established harmony can be found in substances' property of conceptual completeness and some ideas integral to Leibniz's conception of truth. To that extent, this chapter contains what there is of truth, in my opinion, in the logicist view and what I am therefore willing to preserve of it. Following some scholars and opposing others, I argue that, seen against the background of conceptual completeness and related logical doctrines, substances' (prima facie) relations to other substances end up reducing to their absolute, purely qualitative intrinsic states. Further, I argue that these states are identified by Leibniz with substances' perceptions, which, accordingly, are interpreted as non-relational properties: when a substance perceives (prima facie) all the 'other' substances in its universe, what it (truly) perceives is itself and nothing else. This is of course tied up with the view that, for Leibniz, substances are 'world-apart' entities. This cluster of related tenets – reductionism about relations (including 'relational accidents'), perception as a non-relational property and the world-apart doctrine – leaves us with a rather weak conception of the world, according to which the unity of the world consists solely in the fact that it is intentionally – or 'objectively', in Cartesian terminology – reduplicated in the absolute, purely qualitative perceptual states of the world-apart members it comprises. We return to this conception in chapter 5, where it is used as a foil for another, more demanding, account of the requirements for there to be a world.

Long before that, however, in chapters 3 and 4, we continue our inquiry into the grounds of pre-established harmony. In different senses, both chapters are meant to bring the (philosophico-)theological underpinnings of Leibniz's pre-established harmony into relief. Chapter 3 dwells on (C6) and (C7) – perception and pluralism. With respect to (C6), I argue that the reason for Leibniz's view – integral to his pre-established harmony, as I explain in chapter 1 – that every substance is endowed with perceptual power is to be located in his Platonic conception of creatures as imitations of God, in whom there is

¹³ To be precise, (C2) is not given explicit treatment in these chapters. But it gains more prominence in chapter 5.

‘infinite perception’ (A VI, 4: 1542/AG 42) and who ‘is endowed with perception...to the greatest degree’ (GLW 172/AG 234). But imitation is not the only important Platonic notion at the basis of this ‘theological derivation of perception’, as I call it. More fundamentally, things imitate God because he emanates limited instances of his perfections or absolute properties. While most scholars may feel inclined to take Leibniz’s use of ‘emanation’ as merely metaphorical, I suggest that this notion is at the heart of Leibniz’s philosophical theology and that it poses no problem for his non-necessitarian account of the relation between God and things: God can, and does, *freely* emanate limited versions of his perfections. In turn, Leibniz’s conceptualisation of emanation as emanation of perfection will lead us to a discussion of the relation between the absolute and the limited, which, I argue, Leibniz construes (Platonically, again) as entailing the definitional priority of the former over the latter. It is here that the issue of pluralism comes to the fore. For, I argue further, in conjunction with the view that, as Couturat puts it, ‘there is a perfect accord between thought and things, spirit and nature’, Leibniz’s espousal of the definitional primacy of the absolute threatens to undermine – and indeed undermined, in an early phase of Leibniz’s thought¹⁴ – his pluralistic view of reality. However, I propose that it is precisely the notion of perception that allows Leibniz to see off this threat. Particularly, I argue that what makes room for pluralism within Leibniz’s Platonic outlook is the idea that perception is a property of every substance and, more specifically, that perception constitutes the very being of the substances that God emanates. Controversial though this claim may seem, I show that there is textual and systematic evidence for it, and that it is in fact preferable to other *prima facie* strategies for explaining Leibniz’s endorsement of pluralism and his corresponding rejection of substance monism.

Chapter 4 concentrates on Leibniz’s thesis of spontaneity and, related to it, his rejection of occasionalism, components (C5) and (C3) in my formulation of pre-established harmony in chapter 1. This chapter plays a particularly important systematic role, for, as Stuart Brown observes, the spontaneity thesis is that ‘which is really original in Leibniz [and] apart from [which] the pre-established harmony would have been commonplace’ (1984: 184).¹⁵ Presumably, then, if one were able to demonstrate the insufficiency of

¹⁴ Particularly, as we shall see, in 1675–6, the two final years of Leibniz’s stay in Paris.

¹⁵ See also Look (2011b: 101), for whom ‘Leibniz’s commitment to the essential activity and spontaneity of substances is what grounds...pre-established harmony’.

conceptual completeness as an explanation of substances' spontaneity, the logicist view would be left in a particularly vulnerable position. The main purpose of this chapter is to provide such a demonstration. To this effect, I focus on Leibniz's doctrine of miracles, arguing (i) that, for Leibniz, miracles do occur in the actual world, and (ii) that the derivation of substances' spontaneity from conceptual completeness renders miracles impossible. This allows me to show that such a derivation fails to give us a satisfactory explanation of Leibniz's reason for ascribing spontaneity to substances. Besides arguing for this negative claim, however, a second aim of this chapter is to argue for the positive claim that the locus of substances' spontaneity must be placed in their complete natures, which are extensionally different from their complete concepts. This makes for what I call the thesis of 'Limited Spontaneity', according to which not all the true properties of substances are spontaneous, but only their natural properties. As we shall see, arguing for this thesis will require us to discuss a wide range of important metaphysical issues, such as the relation between nature and essence (understood both as specific/abstract essence and as individual essence), the contingency of natural laws, Leibniz's anti-occasionalist (and anti-Newtonian, as I argue) conception of nature as cause and his strong conception of spontaneity as intrinsic causal determination. It will also require tackling a number of important objections, not the least of which are that Limited Spontaneity is (*prima facie*) inconsistent with the universal scope of pre-established harmony and that it appears to run counter to the fact, attested by several passages, that Leibniz does seem to have regarded spontaneity as a consequence of conceptual completeness.

Finally, with all this in mind, in chapter 5 we turn to pre-established harmony and aggregation. My proposal here, as I anticipated, is that Leibniz modelled his pre-established harmony on his conception of the unity of bodies as aggregates. In this sense, this chapter develops what can be seen as a natural philosophical strand of pre-established harmony. Yet, again, Leibniz's theology will be salient here, too. For, on the interpretation I defend, the world is for Leibniz a specific *type* of aggregate whose principle of unity is the perceptual power of God himself. As I explain in detail, the virtue of this interpretation is that it accommodates two Leibnizian doctrines (or sets of doctrines) which are seemingly in tension. On the one hand, Leibniz upholds a strongly reductionist view of relations and, in keeping with it, a world-apart conception of substances. I mentioned earlier that this family

of tenets – all of which I defend in chapter 2 – support a reductionist view of the world: metaphysically speaking, the world is nothing over and above the substances it comprises. On the other hand, however, we will see that there are texts which suggest that, for Leibniz, there is more to the unity and reality of the world than the unity and reality of its metaphysically isolated, self-percipient entities. Part of my claim in this chapter is that the idea of God as the principle explaining the unity of the world can resolve this tension while retaining all the elements that generate it. More generally, if I succeed in showing this, the general picture of pre-established harmony at which we will arrive is one in which Leibniz's logically based doctrines (ch. 2), his philosophical theology (chs. 3–5) and natural philosophy (ch. 5) complement and inform each other in a rich explanation of the world as an aggregate depending on God's perception.

The foregoing remarks are admittedly condensed. To be sure, they raise more questions than they answer. However, I think they are enough to serve the reader as a heuristic aid in following the main threads of the more detailed and documented discussions that follow. More about the aims, structures, arguments and specific theses I defend in each of my chapters is provided in their corresponding introductions and/or conclusions. Also, I have inserted two transition sections at the end of chapters 1 and 4, in the hope they will help the reader to situate herself in the context of the dissertation as a whole. Before moving on to chapter 1, here I should like in closing to mention a few points that my dissertation will not consider. Two remarks are in order, in particular.

First, my dissertation is not intended to be a thorough study of Leibniz's pre-established harmony. Perhaps most obviously, such a study would entail discussing Leibniz's views on mind–body causation, which we shall not do. Our focus, instead, is on the pre-established harmony between all substances – hence the adjective 'general' in the title. But the focus of my study is even more restricted than that. Arguably, Leibniz's pre-established harmony is not only a metaphysical doctrine. As Wilson points out, harmony is, for Leibniz, an 'excellence-making feature of the world', one whose consideration is supposed to be 'ethically motivating' (2005: 109). In this sense, Leibniz's pre-established harmony has an aesthetic as well as a moral dimension. To the extent that harmony is intimately woven with God's aim of maximising perfection, the pre-established harmony is also at the basis of Leibniz's theodicy, his vindication of divine justice by showing that our

world is the world of maximal possible perfection or the best possible world.¹⁶ These topics lie outside the scope of this investigation. Hume famously called causation the ‘cement of the universe’ (*Abstract*, 417); that is, causation is what unifies the world.¹⁷ In the early modern period, the doctrines of real interaction – or physical influx – occasionalism and pre-established harmony were all meant to be causal theories.¹⁸ Thus, they were all meant to be, at least in part, theories of the unity of the world. This is the general angle from which the pre-established harmony will be considered here – hence the subheading of the thesis. What my study lacks in exhaustiveness will, I hope, be made up for in accuracy.

The second point I want to mention is more specific. The arguments I develop in some chapters¹⁹ turn partly on the assumption that Leibniz’s pre-established harmony is rooted in an idealistic ontology, that is, an ontology according to which the only things that qualify as substances are active unities possessed of the property of perception – bodies being only aggregates (quite real, in fact, yet aggregates after all) of such unities. This will surely raise some eyebrows, for, as we will see, there is evidence that Leibniz self-consciously adopted his pre-established harmony around the time of *DM* and the correspondence with Arnauld, a period in which his commitment to idealism is far from clear.²⁰ For reasons of space, I shall not dwell on this difficulty. I would like, however, to mention a few points about it, if only to register where I stand on this matter. I believe (i) that throughout his career Leibniz believed that *per se* unity is a condition of substantiality, and (ii) that, at least from the time he self-consciously adopted it, Leibniz believed that his

¹⁶ The best and most detailed study of this and related topics is Rutherford (1995), in my opinion.

¹⁷ Of course, Hume himself believed that causation is ‘*to us*’ – rather than *in fact* – ‘the cement of the universe’. What I want to retain is Hume’s phrase, not his interpretation of it.

¹⁸ This threefold division of causal theories was widely accepted throughout the early modern period. See e.g. the entry ‘Rorarius’ of Bayle’s *Dictionnaire*; Wolff, *PRL* §§ 571 ff.; Baumgarten, *M* §§ 449–50, 452. It continued to shape causal debates until as late as 1781. See e.g. Kant, *KrV* A390, where he says that physical influx, occasionalism and pre-established harmony are the only possible causal systems. Leibniz shared this opinion. See n. 1 above.

¹⁹ Particularly in chapter 5, but also in some sections of chapter 3, as will emerge.

²⁰ As is well-known, the milestone here is Garber (1985). See also Broad (1975), Jolley (1986), Hartz (1998), Lopton (1999), Bolton (2004), Garber (2009). For interesting re-appropriations and extensions of Garber’s chief insight, see Phemister (2005), Levey (2007) and Levey (2008) – though see Rutherford (2008) for a persuasive reply to Levey. That Leibniz was committed to an idealistic ontology from ca. 1686–7 until his death has been defended by Sleight (1990), Adams (1994), Rutherford (1995), Duarte (2012), Look (2011b) and Antognazza (2016a: 100–12), among other scholars: I follow them and am deeply indebted to their research. As one would expect, there are many more interpretations. Summaries of them can be found in Garber (2009: 385–6) and Look (2011b: 90).

pre-established harmony does not yield *per se* unity.²¹ To elaborate a little more on (ii), I believe (iii) that Leibniz's pre-established harmony only works on the basis of an interpretation of the activity of forms/simple substances as representational power, and such a power does not yield the kind of unity (i.e. *per se* unity) that is required for matter–form compounds to qualify as substances *sensu stricto*.²² So, in sum, I believe (iv) that Leibniz's commitment to pre-established harmony during the so-called middle period presents a powerful case for idealistic readings of his metaphysics in that period. Yet, of course, powerful cases for realistic strands in Leibniz's middle period (and later) have been made too. An adequate defence of the coalescence of idealism and pre-established harmony would have to take those cases into account. I shall not undertake that defence here. Without further ado, let us move on.

²¹ For a development of this point, see Rutherford (2008) and (1995: 266–76).

²² Canonical argumentation in this direction is developed in Adams (1994) and Rutherford (1995). I think that this underwrites the sort of charge levelled by Tournemine against Leibniz's pre-established harmony, namely that it does not bring about 'union' or 'essential connection' between the body and the soul. Leibniz's answer is that, indeed, it does not. See GP VI: 595–6. For more on this, see Adams (1994: 295–9, 304–5), Rutherford (1995: 273–6), and Rozemond (1997).

CHAPTER 1

Setting the Stage: What is Pre-established Harmony?

1. *Introduction*

This chapter focuses on the essentials of Leibniz's theory of pre-established harmony understood as an account of the collective unity of non-interacting substances in general (as opposed to an account of mind–body causation in particular). Although my remarks are meant to go into some detail and I shall in some cases embed them within the context of scholarly discussions, my goal at this early stage is relatively limited. Particularly, I aim to identify and set out what I take to be the main components of Leibniz's pre-established harmony. Also, when necessary, I shall give my opinion as to how these components are to be interpreted, as well as explaining why I think they should be seen as proper components of pre-established harmony. However, no special effort will be made to bring out Leibniz's reasons for these components: that will be our task in chapters 2 to 4.

In section 3, I provide a four-step exposition of Leibniz's theory of pre-established harmony in the sense that concerns us here. In this context, I discuss an interpretation – first advanced by R. Sleigh – that, if correct, would render one of those steps, namely Leibniz's construal of the force of substances as perception, dispensable. However, I argue that Sleigh's interpretation is unpersuasive. Next, in section 4, drawing on the results of section 3, I disentangle seven components of pre-established harmony, the conjunction of which is offered as a formulation of the theory. In turn, this formulation will provide us with a focal point in reference to which the discussion in chapters 2 to 4 will be organised. Before doing all this, however, I begin in section 2 with some relatively rough-and-ready preliminaries about pre-established harmony.

2. *Preliminaries regarding pre-established harmony: its date and primary meaning*

Let me begin with a remark about an 'extrinsic denomination', as it were, of pre-established harmony, if only to clear my ground here at the outset: when exactly did Leibniz come to

hold it? This is an interesting question, but I shall not pursue it in this study. The reason is, quite simply, that the issue of the dawn of pre-established harmony has been the subject of a number of very detailed scholarly disputes, and there is no point in rehearsing them here.²³ To be on the safe side, we can just line up with the great majority of scholars and affirm that, in all its essentials but the name, the theory of pre-established harmony is clearly in place by the second half of the 1680s, notably in §§ 14–15 of *DM* (1686) and the associated correspondence with Arnauld (1686–1687).²⁴ The literature on this topic has shown that the ingredients of the doctrine articulated in these writings can be traced back to earlier texts, and, indeed, the early presence of some of them will be important in connection with arguments I develop in later chapters.²⁵ However, as Lodge rightly points out, one should be wary of taking this as entailing any commitment to the doctrine itself on Leibniz's part: commitment to a conjunction need not follow from a commitment to each of its conjuncts (1998: 293–4, n. 7).²⁶ Furthermore, even if one were to argue – as Lodge himself does – for an earlier date of pre-established harmony as a whole, Leibniz's own remarks about the evolution of his ideas leave little room for doubt that something quite significant in relation to it must have occurred at the time of composition of *DM* and not before. For, as many writings indicate, Leibniz himself dates the maturation of his system to precisely that time.²⁷ And, in *NS* (1695), he strongly suggests that it was the theory of pre-established harmony that provided him with the final step towards this maturation.²⁸ This means that it was only by 1686 that an explicit and reasonably mature theory of pre-

²³ See especially Kulstad (1993a) and Lodge (1998).

²⁴ Scholars on this side include Lucas/Grint (LG: xiii), Parkinson (LA: xlvi), Beck (1969: 226), Brown (1984), Brown (1988: 118), Wilson (1989: 112), Kulstad (1993a: 116, 93), Schönfeld (2000: 140). On the other hand, Mercer/Sleigh (1995: 100–7) have proposed April 1676 as the date of pre-established harmony's emergence. But Lodge (1998) has persuasively argued that the writings of this period do not provide evidence of commitment to any account of intersubstantial causation on Leibniz's part. Lodge himself argues for a middle ground (namely ca. 1678–1682) between the traditional view and Mercer and Sleigh's proposal. He agrees, however, that it was only by the time period of *DM* that Leibniz came to 'explicitly adopt' and 'self-consciously articulate' the pre-established harmony (1998: 317). For more on the issue of pre-established harmony's date, see Garber (2009: 197, n. 43), who draws attention to two relatively early passages that are not taken into account in the previous literature. On the name 'pre-established harmony', see n. 29

²⁵ See chapter 3, section 5.

²⁶ See also Kulstad (1993a: 116, n. 74).

²⁷ See e.g. Leibniz's letter to Burnett of May 1697: 'I changed my mind again and again after new insights, and it is only for about *twelve years* that I have been satisfied' (GP III: 205; my emphasis). See also GP IV: 493, GP IV: 487, GP IV: 477.

²⁸ The key text is at *NS* § 12 (GP IV: 483). See Kulstad (1993a: 94).

established harmony first emerged. So much for the issue of dating. Let us now move towards fleshing out what the theory itself is.

Primarily, the doctrine of pre-established harmony – variously referred to by Leibniz as the theory or hypothesis ‘of agreement’ (GP IV: 485; GP IV: 520; A II, 2: 82), ‘of concomitance’ (A II, 2: 53; A II, 2: 82; A VI, 4: 1647), and ‘of the correspondence of substances’ (GP II: 580)²⁹ – is an explanatory model for the collective unity of all substances. I take this sense of pre-established harmony to be implied in Leibniz’s letter to Arnauld of 9 October 1687, where, in the course of one his most detailed explanations of the theory, he says that if substances fail to ‘harmonise (*accordant*)..., there would be as many systems as there are substances’ (A II, 2: 245/LA 148), thus suggesting that it is substances’ harmonising with one another that allows them to become members of one unified world or system. I have been told that Leibniz’s mere talk of ‘harmony’ – or ‘accord’ – in this and similar contexts does not entitle one to draw any conclusion as to what pre-established harmony’s primary meaning is. So formulated, this objection would survive the somewhat ready retort that, as is widely agreed in the literature, Leibniz’s pre-established harmony is not *only* an explanation of the relation of mind and body but *also* an explanation of the relations between all the substances comprising this universe. For even conceding this, the worry would still remain that Leibniz may perhaps have intended his theory of pre-established harmony as *primarily* an account of the mind–body relation and only secondarily as an explanation of the communication of all substances. Thus Hidé Ishiguro, clearly aiming to downplay the importance of pre-established harmony (or at any rate traditional interpretations of it) as a general account of the interrelation of things, points out that Leibniz only ever uses the label ‘pre-established harmony’ in connection with the mind–body problem (1977: 71).³⁰ To this we may add the position of Russell (1937: 137) and Louis Loeb (1981: 311–2), both of whom have proposed that the theory of pre-established harmony *originated* as a solution to the mind–body problem and only later was extended to apply to all substances. This might seem to create some room to question

²⁹ The name ‘pre-established harmony’ (*harmonie pre-établie*) was used by Leibniz in public for the first time in the so-called ‘First Explanation of the New System’, published in the April 1696 issue of the *Journal des Savants*. See GP IV: 496. For further details on the history of this name, see Woolhouse/Francks (1994).

³⁰ I owe this reference to Lodge (1997: 4). More details on Ishiguro’s view are forthcoming.

the primacy of Leibniz's general pre-established harmony over his mind-body pre-established harmony.

I believe this worry is more serious than it may appear at first, largely because of Leibniz's eagerness to emphasise the significance of his solution to 'the great problem of the union of the soul and the body' through the device of pre-established harmony (A I, 10: 134/WF 36).³¹ However, there is a fairly clear and important text from § 62 of *Theodicy* that, as it seems to me, dispels the worry in all those respects that are relevant for my present purposes, and I shall rely on it by way of reply:

Being on other considerations already convinced of the principle of Harmony in general (*principe de l'Harmonie en general*), I was in consequence convinced likewise of...the Pre-established Harmony of all things among themselves (*l'Harmonie Pré-etablie de toute choses entre elles*), of that between nature and grace, between the decrees of God and our actions foreseen, between all parts of matter, and even between the future and the past, the whole in conformity with the sovereign wisdom of God, whose works are the most harmonious it is possible to conceive. Thus I could not fail to arrive at the system which declares that God created the soul in the beginning in such a fashion that it must produce and represent to itself successively that which takes place with the body, and the body also in such a fashion that it must do of itself what the soul ordains. (GP VI: 136–7/H 157)

For one thing, this passage demonstrates that Ishiguro's claim that Leibniz always employs the label 'pre-established harmony' in relation to the problem of mind-body causation runs counter to the textual evidence. Positively, it shows that Leibniz is happy to take the relationship between all things as a proper referent of his 'Pre-established Harmony'. Interestingly, the passage also involves the suggestion that there is something even wider than the pre-established harmony among all things, namely the '*principe de l'Harmonie en general*'. But this does not detract from the significance of the pre-established harmony among all things with respect to that of mind and body: it only increases the significance of the most general notion of harmony with respect to all the varieties of pre-established harmony identified by Leibniz. As far as the theory of pre-established harmony goes, the passage makes it clear that the pre-established harmony among all things enjoys priority over the pre-established harmony of soul and body: it is from the former that Leibniz 'arrives' at the latter. In saying this, I do not mean to imbue the quoted passage with any

³¹ See also GP IV: 484–5.

autobiographical value. In fact, in *NS*, where Leibniz expressly uses an autobiographical style, there is some indication that, in the order of discovery, the solution to the problem of the soul-body union may have come first.³² Yet the passage does seem to indicate that the soul-body pre-established harmony is *conceptually* subordinated to the more basic pre-established harmony among all things, as all the ‘particular’ kinds of pre-established harmonies listed by Leibniz appear indeed to be. And this is all that my contention above requires: primarily, the doctrine of pre-established harmony is an explanatory model for the collective unity of all substances.

But how does the model go? In the ensuing section, I shall expose what I regard as the four basic steps which constitute Leibniz’s answer to this question. This will put us in a position to provide a formulation of the theory, to be presented in section 4.

3. *Four steps*

3.1. *Universal agreement and no causal interaction (Step 1)*

The first thing to say is that, according to this model, finite substances do not causally interact, and yet all their states are in perfect mutual agreement. There is no commentator in my ken who has ever denied that the latter clause of this statement is integral to Leibniz’s model, and that is of course not surprising. Yet some scholars, foremost among them Ishiguro, have denied the former.³³ As she sees things, the properties of a Leibnizian substance are to be causally accounted for *partly* in terms of its nature and *partly* in terms of the natures of the other substances in its universe. The theory of pre-established harmony is just the view that things’ causal interaction is ‘pre-fixed’ in their natures (1977: 251). When substance *a* takes on the property *P*, this happens by virtue of, say, substance’s *b* acting causally on *a*, yet also by virtue of substance’s *a* being internally pre-ordained to take on *P* at the time it does: this is what explains that their agreement is pre-established.

³² See GP IV: 483.

³³ See e.g. Ishiguro (1972: 147–50) and (1977). Varying as to details, the main insight governing Ishiguro’s view has been advocated by Hintikka (1972), Kulstad (1980), Wong (1980), Woolhouse (1985), McCullough (1996), Plaisted (2002), Maunu (2004), and Puryear (2010), among others. On the other camp are Russell (1937), Rescher (1967), Rescher (1981), Mates (1986), Sleight (1990), Mugnai (1992), Mugnai (2012), Rutherford (1995), Cover/Hawthorne (1999), and what follows. However, it should be noted that not all these scholars are concerned with the problem of *causal* relations in particular.

Thus, the theory does not rule out causal interaction but actually incorporates it while adding the proviso that, for any causal fact involving two or more substances, it obtains in accordance with the information encoded in their natures (1977: 251, 257).³⁴

This interpretation hangs on a broader rejection of Leibniz's commitment to reductionism about extrinsic denominations, as well as on the correlative claim that, for a substance to perceive the whole universe – as Leibniz believes all substances do – it is necessary that there be other, wholly distinct individuals that are the external objects of its perceptions. We shall dwell on this and related topics in chapter 2, section 3. However, there is a well-known Leibnizian doctrine that, in my opinion, strongly opposes this kind of reading, and I want to briefly concentrate on it here.

When, as so often, Leibniz advances theses which clash with received opinions and common intuitions, he hastens to clarify that they can nonetheless 'save the appearances'.³⁵ His theory of pre-established harmony is one such thesis.³⁶ And what this theory is meant to save the appearance of is precisely causal interaction: as a consequence of the mutual agreement of things, substances *appear* to be connected through external causation and reciprocal influence. Call this the 'causal appearance doctrine'. We find a statement of it in § 14 of *NS*, where Leibniz tells us that the 'perfect agreement between all... substances...produces the same effects *as would be observed if* they communicated with one another' (GP IV: 484/WF 18; my emphasis). Likewise, we read in a famous passage from *Mon.* § 81: 'according to the system of pre-established harmony...bodies act as if (*comme si*) there were no souls; and souls act as if there were no bodies; and both act as if each influenced the other' (GP VI: 621/AG 223).³⁷

There are two points about the causal appearance doctrine to which I want to draw attention. The first is that, as already suggested, it undermines the possibility of making

³⁴ In providing this brief statement of Ishiguro's view I have been helped by Woolhouse (1985: 213).

³⁵ For a general statement of this idea, see GP IV: 496. For some comments, see Arthur (2015: 146–7) and next note.

³⁶ See e.g. GP IV: 518. This does not mean that the pre-established harmony is merely a hypothesis whose sole virtue consists in being capable of saving the appearances: it does more than that, as it actually expresses the conditions that *really* obtain at the fundamental metaphysical level. Thus, replying to Bayle's objections to the theory of pre-established harmony as set out in the *NS*, Leibniz clarifies that although sometimes 'what matters is to show the possibility of the theory and its ability to explain the phenomena', he can 'demonstrate all of this' (GP IV: 518/WF 80). See also Leibniz's draft for a letter to Basnage at GP III: 144 and his 'Third Explanation of the New System' (WF 66).

³⁷ See also A II, 2: 245.

room for interactionism within Leibniz's pre-established harmony. Particularly, it entails that the latter is intended as an *alternative* to the former. One might immediately object that the description of a property or event as an appearance does not necessarily imply that that property or event is only an appearance: something might of course appear to be what it *really* is, and substances could therefore appear to interact *and* really do so. Yet that implication, or so I would argue, is exactly what Leibniz seems to have in mind in the case of his causal appearance doctrine. How so?

Let us first agree that, to Leibniz's mind, there is no place for causal overdetermination in the best possible world. That is, in the world displaying the best, wisest possible combination of 'variety of effects' and 'simplicity of means' (A VI 4: 1536–7, 1538; GP VI: 603), it is impossible for there to be an effect, *e*, such that it has a plurality of causes, *c*₁ and *c*₂, any one of which is *by itself* sufficient to bring about *e*: causes, as we may put it, are not to be multiplied without necessity.³⁸ On this basis, let us revert to the passage from *NS* § 14 that I quoted in the previous paragraph and used to support ascription of the causal appearance doctrine to Leibniz:

[The] perfect agreement between all...substances...produces the same effects as would be observed if they communicated with one another.

Note that Leibniz's point here is not simply that the perfect agreement between all substances gives rise to *a certain* appearance of interaction or communication. Rather, his point is that it explains or produces *exactly the same effects (le même effect)* that an interactionist would want to explain by appealing to interaction. If overdetermination is not an option, it follows from this that the perfect agreement between all substances is meant to preclude their interaction: otherwise there would be more causes operating than are necessary to produce the effects. This is precisely the conclusion Leibniz arrives at in a

³⁸ Most scholars agree that Leibniz rejects causal overdetermination. See e.g. Sleight (1990: 143–4), Jolley (1993: 382, n. 33), Rutherford (1995: 178, n.13). As far as I can see, however, they rarely explain why. Leibniz himself is not explicit about his rejection of causal overdetermination. Nor is he explicit about his reasons for rejecting it. Yet he implicitly, and indeed quite clearly, rejects it. For instance, he sometimes derives his denial of intersubstantial causation from the fact that substances' immanent causal powers are sufficient to explain their states, which clearly requires the rejection of overdetermination as a premise. See GP II: 503, A VI, 4: 1582; A VI, 4: 1621; A II, 2: 53. As already hinted, my suggestion is that Leibniz's reason for rejecting causal overdetermination lies in the ontological (causal) parsimony demanded by his conception of the best possible world as the simplest in 'laws' and 'means'.

letter from July 1715, where he says to Des Bosses that, given some features of pre-established harmony, ‘the influence [among substances] is...*superfluous*’ (GP II: 503/RL 349; my emphasis), since such an influence would entail a substance receiving from another substance what it already possesses by virtue of that harmony.³⁹ Hence, the denial of causal interaction is integral to pre-established harmony.

The second point about the causal appearance doctrine that I want to mention is perhaps easier to get hold of. We have seen that, given this doctrine, Leibniz must disavow causal interaction on pain of causal overdetermination. But we have also seen that Leibniz asserts the harmony of substances, and actually their universal harmony: there is a correspondence between all the states of a substance and all the states of every other substance in its universe. In this regard, we might do well to remind ourselves that, as C. D. Broad (1975: 45) once observed, the causal appearance doctrine – or, for that matter, the theory of pre-established harmony – does not deny that a state (or set of states) of a substance ‘really follows’ a state (or set of states) of another substance. Drafting a reply to Arnauld, for example, Leibniz writes that, ‘to be sure, certain thoughts occur to us when there are certain bodily movements, and certain bodily movements occur when we have certain thoughts’ (A II, 2: 111/LA 84). Had he denied this, he would have claimed things’ *harmony* rather than their interaction to be apparent. Now, suppose I am bitten by a dog – my nervous system, stimuli receptors and so on are working normally. As this happens, or almost imperceptibly thereafter, there is a change in my perceptions: I feel pain. This situation raises at least two questions.⁴⁰ The first is, (i) what is the cause of my pain? The second: (ii) why is there a correspondence or harmony between the dog’s bite (the alteration in my body) and the pain I feel? Assuming interactionism is true, there is a fairly straightforward answer to these questions: the cause of my pain is the dog’s bite, and that is what explains the correspondence between the two events. Thus, what answers question (i) also answers question (ii). But things are not so easy for Leibniz: since there is no real interaction, the correspondence between the events must be explained on different grounds. Someone favourably disposed to interactionist readings of Leibniz is likely to counterattack by turning this claim on its head: if things do not interact, then there is no explanation – or

³⁹ The specific feature of pre-established harmony that Leibniz has in mind is, of course, substances’ immanent causal powers – on which more below (Step 3).

⁴⁰ As rightly observed by Jorati (2015a: 389–90), whom I follow here.

anyhow no explanation palatable to Leibniz – available for the correspondence between the dog’s bite and my subsequent pain, which means that Leibniz cannot have disavowed interaction. Indeed, considerations of this sort do appear to underwrite Ishiguro’s view, for on more than one occasion she speaks as though the only alternative her opponents are left with would be to say that the correspondence among things’ states is merely coincidental or a ‘fluke’⁴¹ – an alternative that would be unpalatable to Leibniz, of course.⁴² We shall shortly see that this is far from compelling. And yet this much must be acknowledged: since Leibniz denies causal interaction and at the same time embraces harmony, he is bound to face a challenge that interactionists need not face. It is twofold. Its first side is in essence question (ii): if neither chance nor interaction is an option, how can changes in one thing correspond with changes in another? Further, and under the same supposition: (iii) how can changes in one thing correspond, at every instant and deep down to the most minute details, with all the changes of every other thing in its universe? This leads us to the second step of Leibniz’s theory.

3.2. *Rejection of occasionalism (Step 2)*

Like interactionists with respect to (i) and (ii), Leibniz deals with both sides of this challenge through one single answer: God. With explicit reference to the problem of fortuitous harmony, he writes to Arnauld:

[T]his mutual correspondence⁴³ of different substances (which cannot act upon one another, if one speaks with metaphysical strictness, and which yet harmonize as if they did act upon one another) is one of the strongest proofs of God’s existence or of a common cause...Otherwise the phenomena of different minds would not harmonize with each other, and there would be as many systems as substances; or else it would be pure chance (*hazard*) if they did sometimes harmonize. (A II, 2: 244–5/LA 147–8)

While in this passage Leibniz does not expressly assert that God is the cause of substances’ correspondence, he clearly implies it. For if he were not, why would the harmony between

⁴¹ On this point see Woolhouse (1985: 213). Cf. Ishiguro (1977: 251, 256).

⁴² See e.g. *DM* § 6 (A VI, 4: 1537).

⁴³ I use ‘correspondence’ instead of Mason’s ‘relationship’ in order to keep consistency with the language I have been employing (which is in any case Leibniz’s language: ‘*correspondance*’)

non-interacting substances amount to a demonstration of his existence?⁴⁴ At any rate, the relevant point is made more explicit in other passages. Thus, in an earlier letter to Arnauld, after writing that substances are ‘like worlds apart, independent of everything except God’, Leibniz explains that

[t]his independence does not prevent commerce between substances, for as all created substances are a continual production of the same sovereign Being in accordance with the same plans, they harmonize exactly among themselves. (A II, 2: 81/LA 64; 14 July 1686)

And in *DM*, we read:

God alone brings about the connection and communication (*liaison et communication*) among substances, and it is through him that the phenomena of any substance meet and agree with those of others. (A VI, 4: 1581/AG 64; *DM*, § 32)⁴⁵

Varying as to emphasis and detail, essentially the same explanation is apparent in other passages from the 1680s (GP I: 383–4 [1686]), the 1690s (GP VII: 451 [1696], GP IV: 484 [1695], GP IV: 510 [1698]), the first decade of the 1700s (NE 507 [1704]), and the last decade of Leibniz’s life (GP VII: 344 [1715]).

As it stands, however, this explanation leads to too wide a statement of Leibniz’s position. For, although it could provide him with an alternative to both interactionism and fortuitous agreement, it is consistent with the view that God is the sole cause not only of the agreement among substances’ states but also of the states *themselves*. Occasionalist thinkers defended just this view, arguing that God alone can be a real cause and, consequently, every change and event in nature must directly be brought about by him, created substances making no contribution whatsoever: whether minds or bodies, finite beings are mere ‘occasions’ for God’s continual causal intervention.⁴⁶ With respect to this, it is worthwhile

⁴⁴ For pre-established harmony as a proof of the existence of God, see also GP IV: 486, GP VI: 613, GP VII: 344, NE 440.

⁴⁵ See also *DM* § 14 (A VI, 4: 1551–2).

⁴⁶ See GP IV: 509. As is well known, the main advocate of the doctrine of occasional causes was Malebranche, who develops a detailed defence of it in *Recherche* VI, 2, iii (OM II: 309–20), ‘Elucidation XVth’ (appended to *Recherche* VI, 2, iii) (OM III: 203–252), and *Entretiens* VII (OM XII: 147–72). When Leibniz speaks about occasionalism, it is Malebranche’s version that he almost always has in mind. See GP IV: 507, GP IV: 509, and Sleight (1990: 151). Advocates of Malebranche’s occasionalism include Géraud de Cordemoy and Arnold Geulincx (GP IV: 509). A soft or restricted version of the theory was held by Louis de la Forge. Like pre-established harmony, the theory of occasional causes is primarily intended as an account of causation in general, the problem of soul-body agreement being only a particular application of it. See Lennon (1974), Nadler (2000), Garber (2009: 190 ff.).

to note that, in a sense, the occasionalist answer to the questions posed at Step 1 is even more economical than Leibniz's. For Leibniz, reference to God explains the agreement between a particular change of state and its correlative (*prima facie*) external cause, as well as the agreement between that change and those of every other substance in its universe – that is, questions (ii) and (iii). Yet it does not explain question (i): God is the sole cause of the *correspondence* between the changes of state of substances, not of the mutually corresponding *changes*. Leibniz is emphatic about this in his replies to Lamy's objections to NS: 'I don't at all agree that God alone is active in substances, or is the sole cause of their changes (*cause seul leur changemens*)' (GP IV: 589/WF: 163). Occasionalists extend God's role further yet: he guarantees the correspondence between all the states of every substance in a universe *and* causes all those states at every moment: what answers (i) also answers (ii) and (iii).

As appealing as it may seem, Leibniz has a number of reasons for rejecting this causal theory.⁴⁷ One of these reasons is especially important in order to appreciate the particular direction in which his pre-established harmony deviates from it. In *IN* §§ 8–9, Leibniz contends that, if God were the sole cause of change, then we would be left with no explanation as to why a substance, while changing through time, continues nonetheless to be one and the same individual. Suppose the entire efficacy of a substance reduces to God's. Then, Leibniz thinks, there remains nothing *in* that very substance which may serve as the ground or reason for the connection between its states at different times and hence for ascribing them to one enduring individual: substances' properties would cease to be *their* properties and so 'things themselves' would be unable 'to endure through time' (GP IV: 508/AG 159). Though with a different end in view, Leibniz makes the point more vividly in a draft for his letter to Arnauld of July 14, 1686:

Suppose a straight line ABC representing a certain length of time. And suppose a certain individual substance, for instance me, existing or surviving during that length of time. Let us then first of all take me as existing during the time AB, and also as existing during the time BC. Since then one supposes that it is the same individual substance continuing to

⁴⁷ The literature on Leibniz on occasionalism is vast. Comprehensive treatments of this topic can be found in Sleight (1990: 161–70), Rutherford (1993), and Jolley (2005). There is some evidence that the early Leibniz embraced occasionalism. See e.g. A VI, 3: 100 (1672–3); A VI, 3: 493 (April 1676). His flirtation with this doctrine seems to have come to an end by the time of the *Pacidius Philalethi* (October 1676). See A VI, 3: 566–7. For more on Leibniz early occasionalism, see Garber (2009: 189–94).

exist, or that it is I who exist in the time AB and I am then in Paris, and that it is also I who exist the time BC and am then in Germany, there must of necessity be a reason for the true statement that we continue to exist –that is to say, that I, who am in Paris, am now in Germany. For if there is no reason, one would be as justified in saying that it is another person. To be sure, my subjective experience has convinced me a posteriori of this identicalness, but there must also be one a priori. Now, it is impossible to find another identity, except that my attributes of the preceding time and state as well as those of the following time and state are predicates of one and the same subject, *insunt eidem subjectum* [they are present *in* the same subject].⁴⁸ (A II, 2: 49/LA 46–7)

In this context, Leibniz goes on to explain that what permits something to remain identical through time is that it has an exhaustive and uniquely applicable concept – a complete individual concept – a device which is not invoked in *IN* or in any other post-1680s writing.⁴⁹ Yet the basic insight seems to be the same: substances’ endurance requires that there be a *reason* for their successive states and that reason must be *intrinsic* to the substances themselves. Hence, the universal agreement among substances cannot be interpreted so as to entail, as occasionalists have it, that their states are imposed *ab extra* by God.

Some scholars may feel reluctant to see Leibniz’s views in *IN* as being as closely related to those in the Arnauld correspondence as I have suggested, so let me look at the point from another angle before moving on to the next step.⁵⁰ In § 5 of *IN*, Leibniz invites us to consider two distinct ways of thinking of God’s creative act: either creation consists in ‘a volition or command’ that has ‘bestowed a mere extrinsic denomination on things’ or else it is an act that ‘has truly conferred upon them some created impression which endures within themselves (*in ipsis perdurantem*)’ (GP IV: 506–7/AG 158). To Leibniz’s mind, the first of these alternatives – which he attributes to occasionalists like Sturm and ‘the very acute Malebranche’ – must be rejected. As Christian metaphysicians, both Leibniz and occasionalists agree to the general idea that creatures’ dependence on God consists in a real

⁴⁸ In the draft Leibniz left this last sentence in the Latin.

⁴⁹ This is not to say that the idea of ‘completeness’ as a characteristic of substances completely disappeared after the 1680s. See Rutherford (1995: 138 ff.) and Mugnai (2012: 197). Nor is it to say that the complete-concept theory of substance is in conflict with Leibniz’s later views.

⁵⁰ The worry here, raised by Wilson, is that the metaphysics of the correspondence with Arnauld (as well as that of the associated *DM*) and that of *IN* (as well as that of post-1680s writings more generally) exemplify two *incompatible* metaphysical outlooks, the former based on the static model of complete concepts, the latter on a markedly dynamical account of substance. See Wilson (1986: 190). For an assessment of Wilson’s view, see Rutherford (1995: 138 ff.).

bond of continued creation or conservation.⁵¹ Discrepancies arise, however, when one turns to the issue of what exactly the implications of such an idea are. For occasionalists, as Rutherford (1993: 139) explains, to be continually produced by God requires one to give up the claim that created substances have genuine causal powers: ‘it is God who does everything in everything (*tout en toutes choses*)’ (OM V: 148). As Malebranche puts it in *Entretiens* VII, 7–10, since ‘conservation is simply a continuous creation, it is a contradiction...for one body to be able to move another. Further, I claim, it is a contradiction for you to be able to move your armchair. Nor is this enough; it is a contradiction for all the angels and demons together to be able to move a wisp of straw’ (OM XII: 160/JS 115).⁵² While agreeing with Malebranche that creation is continual production, Leibniz departs from the strong conclusion he extracts from this. In the reply to Lamy from which I have already quoted, he writes:

In a way I agree with the first point, that God continually produces all that is real in created things. But I also hold that to do so he continually produces or conserves *in (en)* us that energy or activity which according to me constitutes the very nature of a substance, and the source of their modifications. And so I don’t at all agree that God alone is active in substances, or is the sole cause of their changes, and I believe that this would make created things completely vain and useless. (GP IV: 588/WF: 163)

Leibniz’s claim, in this passage and elsewhere⁵³, that God ‘continuously produces all that is real in things’ raises difficulties as to exactly how he thinks that his conception of creation can successfully safeguard the autonomy of substances’ activity against the occasionalist threat. The literature on this topic defies easy comment, and I shall not take up the numerous challenges it poses here.⁵⁴ For the purposes of this preliminary discussion,

⁵¹ See GP VI: 119; A VI, 4: 1546. For Malebranche’s case, see *Entretiens* VII, 7 (OM XII: 157).

⁵² As is well known, this is not the only argument Malebranche gives for occasionalism. Another argument (or family of arguments) turns on the analysis of causation. Anticipating Hume, Malebranche argues that a true cause is such that it involves a ‘necessary connection’ between cause and effect. However, such a connection requires ‘infinite power’ on the part of the cause. Thus creatures cannot be true causes precisely because they are creatures. See *Recherche* VI, 2, iii (OM II: 309–20; especially 316) and, for some comments, Nadler (2000: 117). Cf. Hume, *Enquiry*, 68. This explains why Malebranche thinks that the attribution of causal powers to creatures entails idolatry: we ‘admit something divine’ in things, turning them into little gods (OM II: 309/LO 446). There is an irony here: for Leibniz, it is occasionalism that entails nature’s deification, and indeed Spinozism. See below.

⁵³ See GM II: 299.

⁵⁴ In short, the main problem is this: if God – the primary cause – continuously produces all that is real in creatures, what are creatures supposed to contribute as causal partners? The notion of secondary cause is, of course, important here, but Leibniz’s explanation of the way in which God concurs with secondary causes

the relevant moral to be extracted is twofold. First, Leibniz conceives of creation as an act of continual production *and*, at least as far as his intentions go, parts company with the conclusion occasionalists believe is implied by this conception: God ‘accommodates everything to his ends through intermediaries that act through themselves [*per media spontanea*]’ (GP VII: 344/AG 319; cf. GP VI: 348).⁵⁵ Second, and more importantly, the reason for this departure is that substances’ diachronic identity would simply be unintelligible if they were deprived of an internal grounding for their states.⁵⁶ This is how Leibniz aims to rebut the view of creation as a ‘command bestowing a mere extrinsic denomination on things’ he has referred to in *IN* § 5:

Since the past command does not now exist, it cannot now bring anything about unless it left behind it some subsistent effect at the time, an effect which even now endures and is now at work. Whoever thinks otherwise, in my judgment, renounces all distinct explanation of things; anything could equally well be said to follow from anything else if something absent in place and time could be at work here and now, without an intermediary. (GP IV: 507/AG 158; *IN* § 6)

Soon afterwards, Leibniz extracts a third moral, one virtually contained in the second and anticipated by his passing remark to Lamy, encountered above, that activity ‘constitutes the very nature of a substance’:

If no force lasting through time can be imprinted on [substances]...it would follow that no created substance, no soul would remain numerically the same, and thus nothing would be conserved by God, and consequently all things would be only certain vanishing or unstable modifications or phantasms, so to speak, of the one permanent divine substance. Or, what comes to the same thing, God would be the very nature or substance of all things, the sort

does not seem to help much. Thus, in *CDA* §§ 10–12, Leibniz says that divine concurrence is both ‘immediate’ and ‘special’, that is, creatures depend on divine operation no less after the time of their beginning than when they first begin, and this dependence concerns not only the existence of creatures but also their ‘actions, modes of existence and qualities’. See GP VI: 440. Cf. GP VI: 343. Prima facie, this strongly resembles Malebranche’s view that ‘God does everything in everything’. Different attempts at resolving this problem can be found in Sleight (1990: 183–85), Adams (1994: 94–9), Vailati (2002), Lee (2004), and McDonough (2007). For a summary of the most important proposals, see Look (2011a: 179–84).

⁵⁵ Some scholars, notably Wilson (1989) and Whipple (2010b), have rejected that, for Leibniz, creation is continuous creation, his references to this idea being mere vestiges of an earlier occasionalist phase. This is hard to swallow. Expressing commitment, Leibniz repeatedly employs ‘continued creation’ and related vocabulary in passages that span almost thirty years of his life. See e.g. A VI, 4: 1549 (1686); A VI, 4: 1596 (1686–7); GP IV: 514 (1698); GP IV: 588 (1702); GP VI: 119 (1710); GP VII: 358 (1715).

⁵⁶ The reference to unintelligibility tracks Leibniz’s claim that the doctrine of occasional causes implies perpetual miracles. We shall take up this topic at greater length in chapter 4.

of doctrine that a recent writer, subtle indeed, though profane, either introduced to the world or revived. (GP IV: 508–9/AG 160)⁵⁷

In short, if occasionalists are right, then Spinoza is also: the identity of substances can only be secured by their having an ‘intrinsic force lasting through time’. In the absence of such a force, there are no substances but only one substance, namely God, the only being to whom power is ascribed. So, again, the conclusion we reach is that God cannot be the sole cause of things’ effects, even if he is the overall source of their correspondence: God does not move things ‘like a woodcutter moves an ax, or like a miller operates his mill, either by holding back the water or diverting it to the wheel’ (GP IV: 506/AG 158).

3.3. *Intrinsic force, efficient causation, spontaneity (Step 3)*

If this conclusion holds true, and if finite substances do not interact causally, then the third step of Leibniz’s theory of pre-established harmony will naturally have to incorporate the notion of intrinsic force as a component of that theory. Leibniz does just this in § 10 of *IN*, where both the role of God and that of creatures are included in a summary statement of his conception of ‘the interrelation between substances’:

The interrelation between substances or monads arises not from an influence but through an agreement (*consensus*) derived from divine preformation, accommodating each thing to things outside of itself while each follows the intrinsic force (*vim insitam*) and laws of its own nature. (GP IV: 510)⁵⁸

Now, the intrinsic forces Leibniz refers to here are not just any kind of faculty or power whatsoever. This is in a way obvious, for we have seen that, in embracing such forces, Leibniz is seeking to disassociate himself from occasionalism, and even occasionalists would be prepared to accept faculties provided they are understood in a certain sense, that is, as *passive* faculties. Thus, in *Entretiens* VII, 2 Malebranche says that when we consult the idea of extension we do not conceive of any property ‘*other than the*

⁵⁷ The ‘subtle though profane’ writer is obviously Spinoza, as Leibniz reveals in § 15 of *IN* (GP IV: 515).

⁵⁸ Leibniz does not mention the pre-established harmony in this passage, but he does say that he has ‘already explained elsewhere’ the doctrine summarised in it. He is clearly alluding to his *NS* – published three years before – the principal topic of which is the pre-established harmony.

passive faculty (*faculté passive*) of receiving various shapes and motions’ (OM XII: 150/JS 106; my emphasis).⁵⁹ Nor are Leibnizian intrinsic forces *mere* active faculties. Indeed, when Leibniz introduces his notion of intrinsic force in *De prima philosophia Emendatione, et de Notione Substantiae* of 1694,⁶⁰ he contrasts it with the ‘faculty of the Scholastics’, which he expressly characterises as a particular kind of ‘active’ power: ‘The active power or faculty (*potentia activa seu facultas*) of the Scholastics is nothing but a close possibility of acting, which needs an external stimulus, as it were, to be transferred into action’ (GP IV: 469/L 433).⁶¹ Unlike theirs, his ‘active force’, Leibniz explains, ‘contains an act or entelechy’ and gives rise to action by itself through an inherent tendency, *conatus* or effort towards action, requiring no external stimulus (GP IV: 469–70/L 433).⁶² Giving greater specificity to this notion, in *IN* § 6 Leibniz goes on to tell us that substances were ‘rendered appropriate for fulfilling [God’s] will’ by having been endowed with ‘a certain intrinsic *efficacy*’ (*quadam inditam...efficaciam*) – a ‘force or form’ – ‘from which the series of phenomena follow (*consequeretur*)’ (GP IV: 507; my emphasis). As I understand these passages, they involve two important ideas. The first, encapsulated in the by-itself or no-external-stimulus condition, is what in many passages Leibniz expresses in terms of the thesis that ‘every substance has a perfect spontaneity’ (A VI, 4: 1581/AG 64; on which more below).⁶³ The second idea, embedded in the phrase ‘a certain efficacy’, is that substances’ intrinsic forces are to be understood as *efficient* powers. So Leibniz’s intrinsic forces are neither mere powers nor mere active powers but active powers which spontaneously and efficaciously bring about the states of the beings in which they inhere: they are *spontaneous efficient causes*.

While there is general agreement that Leibniz embraces the thesis of spontaneity and regards substances’ intrinsic powers as causes, not all commentators agree that these

⁵⁹ The occasionalists’ avowal of passive powers is also implicit in De Volder’s letter to Leibniz of 14 November 1704. See GP II: 274.

⁶⁰ This is not to say that *De Emendatione* is the first text in which the notion of force appears in Leibniz’s philosophy. But the notion of force does become more prominent from the time period of that text onwards. For more details, see Rutherford (1995: 148 ff.).

⁶¹ See also GP IV: 479 and the first draft of *NS* (GP IV: 472), which reproduces the quoted passage of *De emendatione* almost literally. In the *New Essays* (1704), however, Leibniz couples the Scholastic notion of faculty with the idea of the mind as a *tabula rasa*, and describes it not as a (however defective) type of active faculty, but rather as an ‘inactive faculty’ (*facultés sans quelque acte*) or ‘pure power’ (*pures puissances*) (NE 110).

⁶² With respect to external stimuli, see also GP IV: 558.

⁶³ See also A VI, 4: 1575; A II, 2: 53; GP VI: 138, GP VI: 296, GP IV: 484, GP IV: 518, GP IV: 558, NE 210.

causes are efficient causes, so we need to dwell on this for a little longer.⁶⁴ Reconsider the passage from *IN* § 6 which I quoted towards the middle of the previous paragraph. There Leibniz suggests that the notion of *form* captures the idea of force that he has in mind: ‘*formam vel vim*’, he writes. Now, drawing on Aristotelian premises, forms do of course fall under the heading of cause.⁶⁵ Yet they do not quite fall under that heading as efficient causes or ‘primary sources of change’ (*Phys.* 194b29). Rather, forms are causes in that they provide an ‘account of the essence’ of something (*Phys.* 194b27), and in that they bring something from potentiality to actuality or ‘actuate’ something.⁶⁶ To the extent that they fulfil the role of giving an end or goal to that which they ‘actuate’, forms, construed as causes, can also be said to work as final causes (*Phys.* 198a23–26). But, again, more than ends appear to be needed in order for a change to occur: there must also be something which acts for the sake of the end.⁶⁷ Bearing all this in mind, Leibniz’s reference to forms in *IN* § 6 might seem to indicate that he regards immanent causation not as efficient causation but as formal/final causation.

There are two passages that I know in which Leibniz appears to think of the causal activity of forms along the lines of an Aristotelian principle of ‘actuation’.⁶⁸ And, of course, Leibniz is famous for having accepted goals or ends in the era of the ‘new philosophers’, who banished final causation from the natural realm.⁶⁹ However, there are a number of good reasons to believe that, though not exclusively, Leibniz conceived of the intrinsic powers of substances as efficient causes.

⁶⁴ The most important, and also the most explicit, scholar who has denied efficient causation at the creaturely level is Lee (2004). According to him, the sole productive or efficient cause is God, creatures being causes only to the extent that they prescribe, in virtue of their forms and ends (i.e. as formal and final causes), the particular state God produces in them. Though he is far less explicit, also Sleight (2009: 270) appears to hold a similar view. In favour of seeing creaturely causation as both efficient *and* formal/final causation are Adams (1994: 309–14), Rutherford (2005: 166), Carlin (2006: 231), and Jorati (2015b). A more radical view is defended by Bennett (2005: 139), for whom efficient causation is the *only* type of causation that, according to Leibniz, should be attributed to creatures. An exceedingly clear and useful summary of the main positions on this matter can be found in Jorati (2015b), by whom I have been helped in this footnote.

⁶⁵ More specifically, forms are one of the four types of causes distinguished by Aristotle. For Aristotle’s famous theory of the four causes, see *Phys.* II, 3 and *Met.* V, 2.

⁶⁶ See Pasnau (2011: 549–552), Adams (1994: 309–10).

⁶⁷ That ends, without efficient causes, are not sufficient to produce something was common doctrine among Aristotelians. For more on this, see Jorati (2015b: 392) and Jorati (2015c).

⁶⁸ The first is in Leibniz’s letter to De Volder of 20 June 1703. See GP II: 250. The second is in a paper entitled (by the editors) ‘On body and force, against the Cartesians’ (1702). Here Leibniz says that “an entelechy ‘actuates’ (*actuo*) an organic body” (GM VI: 101). I owe this second reference to Adams (1994: 310, n. 6).

⁶⁹ See A VI, 4: 1560. See also A VI, 4: 1566; A VI, 4: 1665; GP IV: 472.

(i) First of all, both Robert Pasnau (2011: 550 ff.) and Robert Adams (1994: 309–14) have persuasively argued that, whatever Aristotle’s own views on this matter, sixteenth- and seventeenth-century Aristotelians conspicuously extended the causal activity of forms so as to cover both strictly Aristotelian ‘formal’ causation *and* internal efficient causation. For example, Suárez – whose influence on Leibniz has been well documented – says that ‘the formal cause [is] the principal source of all the actions of the subject’ (*Disp. Met.* XVIII, v, 1), an account which clearly resembles the idea of an efficient cause.⁷⁰ The significance of this lies not of course in any interpretative claim about the way in which later Aristotelians transformed the views of his master. What makes it relevant for my purposes, rather, is that Leibniz seems to agree with them. This is clear from § 3 of *NS*, where, after acknowledging his indebtedness to ‘Aristotle’s first entelechies’, Leibniz says that the ‘force’ his ‘forms’ consist in ‘contains not only actuality or the fulfilment of possibility’ – that is, I take it, the ‘actuation’ of a potentiality – but also an *originating activity*’ (GP IV: 479/WF 12; my emphasis). While the phrase ‘originating activity’ (*activité originale*) might perhaps seem somewhat mysterious at first sight, there is at least one text in which Leibniz characterises efficient causes precisely in these terms: ‘the origin (*origem*) is the efficient cause, as a father originates a son’ (A VI, 4: 32). This suggests that one thing that interested Leibniz about forms, or at least about those forms he was willing to rehabilitate, is that they are efficient causes.

(ii) A closer look at the context of Leibniz’s reference to forms in *IN* § 6 lends further support to this. For when Leibniz mentions forms alongside the notions of force and form, he also mentions the notion of *nature*: ‘force or form, something like what we usually call by the name “nature” (*naturae*)’, he writes (GP IV: 507/AG 159). Now, a few paragraphs earlier, in *IN* § 3, Leibniz had already explained that what he understands by nature is – with Aristotle – ‘a principle of motion and rest’, where ‘motion’ means ‘change’ (GP IV: 506). And, in the very title of the work we are considering, he equates ‘nature itself’ with ‘intrinsic force’ (GP IV: 504). If this is so, and if natures are principles of change, it follows that intrinsic forces are principles of change. But what else could an

⁷⁰ I owe this reference to Adams (1994: 310). See also *Disp. Met.* XVIII, ii, 3. For other scholastic sources, see Pasnau (2011: 549–552). On Suárez influence on Leibniz, see Robinet (1981) and Ariew (2012).

efficient cause be if not a principle of change? Hence, substances' intrinsic forces are efficient causes.

(iii) The third and final reason for construing intrinsic causation as efficient causation that I wish to consider concerns the notion of spontaneity. An examination of the texts in which Leibniz presents an account of spontaneity and its cognates suggests that there are two complementary component ideas to this notion. I have already introduced one of them: a state (event, action, property) is spontaneous if its actualisation requires no external stimulus. That is, a spontaneous state is actualised by the substance of which it is predicated and by that substance *alone*. Here are some representative texts:

Spontaneous substance is the *one and only* (*unum et solum*) source of its own modifications. (C 14/MP 175; my emphasis)

[A]n action is spontaneous when its source is in him who acts... Thus it is that our actions depend *entirely* (*entierement*) upon us. (GP VI: 296/H 309–10; my emphasis)

[F]or every present state of a substance occurs to it spontaneously and is *only* (*n'est qu'*) a consequence of its preceding state. (A II, 2: 53/LA 47; my emphasis)

As for Spontaneity, it belongs to us insofar as we have within us the source of our actions... I maintain that our spontaneity suffers no exception and that external things have no physical influence upon us. (GP VI: 289/H 303)

Other texts display a weaker and (in my opinion) less exact conception of spontaneity⁷¹:

As for Spontaneity, it belongs to us insofar as we have within us the principle (*principium*) of our actions. (GP VI: 289/H 303)

[W]e act with spontaneity, in that there is a principle of action within us. (Gr 480/SLT 97)

[Spontaneous actions] have their principle in those who act. (GP VI: 455; *CDa* § 108)

That is spontaneous which has the principle of action in the agent. (C 474)

The Spontaneous is something whose principle of action is in the agent. (A VI, 4: 1380/*Confessio* 123)

⁷¹ In chapter 4, section 4, I shall argue in more detail that strong spontaneity is the view which more adequately captures Leibniz's understanding of spontaneity.

The basic point in this second set of statements is that an action is spontaneous if the principle of action is internal to that which acts. This view of spontaneity is clearly consistent with the stronger one, but they are not equivalent. Something might have an internal principle of action without having that principle as its only principle of action, which is what the stronger notion of spontaneity demands. Be this as it may, what I want to suggest is that, as characterised in the quoted statements, each of these accounts of spontaneity speaks in favour of seeing substances' intrinsic causal powers as efficient powers.

Beginning with the first account, consider the last statement quoted in the first set of passages. It implies that spontaneity rules out the physical – i.e. real – influence of external things.⁷² Arguably, the physical influence that spontaneity is implied to rule out is, for Leibniz, the efficiently determining activity of external things. This is plausible enough, for, as O'Neill (1993: 29–30) has argued, the two most secure candidates from whom Leibniz may have acquired the label 'physical influence' are Suárez and Daniel Stahl – a colleague of Leibniz's teacher Jacob Thomasius – and both of them define the physical cause as an efficient cause.⁷³ Now, Leibniz would not, of course, have avowed effects having no efficient cause. So, if external influence is ruled out, then the efficient cause of the states of a substance will have to be located within that very substance. The import of this, in other words, is that intrinsic efficient causation can be seen as a corollary of Leibniz's denial of extrinsic efficient causation. This is exactly what we find in a passage from the *New Essays*, where the conclusion that 'everything comes to a substance from itself' or 'occurs in the substance spontaneously' is derived from the premise that 'no created substance can have an influence upon any other' (NE 210). The same derivation pattern is found in § 11 of *Mon.* (GP VI: 698) and in *Metaphysical Consequences of the Principle of Reason* of 1712: 'because (*quia*) there is no means by which one simple

⁷² The qualification 'real' is important, for 'physical' need not here mean corporeal. See e.g. *Theodicy* § 27, where Leibniz ascribes 'physical cooperation' (*concoors physique*) to God – an immaterial substance (GP VI: 118/H 139). Also Suárez understands 'physical' in this broad sense. See *Disp. Met.*, XVII, ii, 6, where he talks both of God and angel as 'physical causes', clarifying that 'physical cause is not taken for corporeal or natural cause..., but more universally for a cause truly and really inflowing into an effect'.

⁷³ See Suárez, *Disp. Met.* XVII, ii, 6; Stahl, *Regulae Philosophicae*, Pars II, § 9 (quoted in O'Neil [1993: 29–30]).

substance could influence another, it *follows (sequitur)* that every simple substance is spontaneous' (C14/MP 175, my emphasis).⁷⁴

One could object at this point that, without aiming for any more details than it contains, this reasoning does not really settle the case in favour of ascribing intrinsic efficient causation to substances.⁷⁵ For Leibniz's rejection of external influence applies at the level of *finite* substances only: 'no *created* substance can have an influence upon any other', as Leibniz says in the *New Essays*. So, even if one concedes that, for Leibniz, there is no effect without an efficient cause and substances do not interact causally, the possibility still remains that *God* could be the only true *efficient* cause, created substances' causal contribution being confined to formal/final causation. And this, admittedly, would not collapse Leibniz's position into occasionalism, because, as committed Cartesians, occasionalists do not countenance formal and final causes in nature.

A full answer to this objection would require us to enter into the vexed topic of Leibniz's views on divine concurrence, which, as previously noted, we shall not do. But we need not go so far afield in order to strengthen the case for efficient causation in creatures. For here we can resort to the statements quoted in the second set of passages. As indicated earlier, all these statements express one basic proposition, namely that

- (1) an action is spontaneous if the principle of action is internal to that which acts.

Now, Leibniz defines the efficient cause in a variety of ways, but the general idea which predominates is this:

- (2) the efficient cause is a cause through action.

⁷⁴ As seen in our discussion of causal overdetermination, in other texts Leibniz proceeds the other way around – from the affirmation of intrinsic causation to the denial of extrinsic causation. See e.g. GP II: 503.

⁷⁵ The objection that follows is part of Lee's argument for the idea of God as the only efficient cause. See Lee (2004: 225–6) and n. 64 above.

Thus he writes that ‘the efficient cause is the active cause’ (C 472), that ‘that is efficient (*efficiens*) whose action is a cause’ (A VI, 4: 29),⁷⁶ and that ‘the efficient cause is a cause through action (*per actionem*)’ (A VI, 2: 490).⁷⁷ It takes only a moment of reflection to see that, jointly considered, (1) and (2) speak strongly in favour of allowing for efficient causation in finite substances. For, as we have seen, Leibniz thinks that

(3) ‘every substance has a perfect spontaneity’. (A VI, 4: 1581/AG 64)

Given (1), it follows from (3) that

(4) the principle of action of every finite substance is located in itself.

But if (4) holds true and an efficient cause, as (2) states, is a cause through action, it follows that

(5) there is efficient causation in every finite substance.

This closes my arguments for efficient causation in finite substances. There is surely much more to say about intrinsic force and its connection with the notions of spontaneity, intrinsic causation and nature. We shall take up this family of notions at greater length in chapter 4. There are two more general points about intrinsic force and its relation to pre-established harmony that we must briefly touch on before moving on to Step 4.

First, as is perhaps obvious from the exposition in this and the previous steps, Leibniz’s introduction of intrinsic forces as a component of pre-established harmony allows him to advocate a middle ground between the two other causal theories that we have met thus far. On the one hand, interactionism – or the ‘way of influence’ (GP IV: 498; A VI, 4:

⁷⁶ To be precise, the term for ‘cause’ in this sentence is not actually ‘*causa*’ but ‘prerequisite’ (*praerequisitum*). But in the previous line Leibniz defines ‘*praerequisitum*’ as ‘the cause of something which is called “effect”’ (A VI, 4: 29).

⁷⁷ I borrow the first and third quotation from Jorati (2015b: 391). For another definition of the efficient cause in terms of action, see A VI, 4: 139: ‘*Efficiens est cause quae confert ad effectum agendo*’. In other passages Leibniz defines the efficient cause in terms of ‘generation’ (A VI, 4: 375), ‘production’ (A VI, 4: 546; A VI, 3: 451), ‘motion’ (A VI, 4: 1682), or ‘origin’ (A VI, 4: 32).

1647)⁷⁸ – held that finite substances are capable of both external and internal causation: whether homogenous or heterogeneous in nature, creatures act causally on each other, just as they act on themselves. At the other end of the spectrum, we find occasionalism, according to which finite substances are causally inert. In agreement with interactionism and against occasionalism, the theory of pre-established harmony embraces intrasubstantial (immanent) causation. Against occasionalism and in agreement with interactionism, it denies intersubstantial (transeunt) causation.⁷⁹

Secondly, Leibniz’s introduction of internal forces or, for that matter, intrinsic causation suggests that there are two senses in which the harmony among substances can be said to be pre-established.⁸⁰ First, looking, as it were, from God’s standpoint, substances’ harmony is pre-established in the sense that it is predetermined by God *ab initio*: it ‘arises through a consensus derived from divine pre-formation (*a divina praeformatione*)’, to use the language of *IN* (GP IV: 510)⁸¹. The second sense looks at harmony from the bottom up. What I have in mind is this:

The present state of each substance is a natural result of its *predecessor*. (GP IV: 521; my emphasis)⁸²

The same claim features as an ingredient of the theory of pre-established harmony, referred to as the ‘hypothesis of concomitance’, in Leibniz’s draft for the letter to Arnauld of 4/14 July 1686.⁸³ Leibniz’s talk of ‘state’ in these passages might seem odd, for, in light of our foregoing discussion, we would have expected him to say ‘force’. But both terms stand for

⁷⁸ Leibniz has other names for this theory: ‘physical influence’ (NE 135, GP VI: 135), ‘the hypothesis of impression’ (GP II: 58), ‘transmission of species or qualities’ (GP IV: 484). For a full account of this theory, both in general and with reference to Leibniz, see O’Neill (1993).

⁷⁹ Mendelson (1995: 34) summarises this in the following useful chart:

	Interactionism	Pre-established Harmony	Occasionalism
Intrasubstantial causation:	Yes	Yes	No
Intersubstantial causation:	Yes	No	No

The scholastic language of immanent/transeunt causation is not prominent in Leibniz’s writings, but it does occur in some passages. See e.g. GP IV: 510. Cf. Sleight (1990: 139, n. 1).

⁸⁰ A similar distinction to the one I am about to draw is suggested by Rescher (1976: 66).

⁸¹ See also GP VI: 356–7.

⁸² See also GP I: 382 (to Foucher, WF 52), GP IV: 579 (to Lamy, WF 154), GP VI: 609 (*Mon.* § 22), GP VII: 412 (to Clarke, LC 85).

⁸³ See A II, 2: 53.

the same referent. Leibniz is explicit about this in a letter to Jacques Lelong of 5 February 1712:

By the force (*Force*) I give to substances I understand nothing but the *state* (*etat*) from which another state follows. (Robinet 421; my emphasis)

A similar passage occurs in the reply to Bayle's second objections to *NS*, where Leibniz clarifies that by 'force' (*force*) he means 'the source of modifications within a created thing, or a *state* (*estat*) of that thing from which it can be seen that there will be a change of modification' (GP IV: 568/WF 122; my emphasis). If this is so, and if Leibniz construes substances' forces as causes, the harmony among substances can be said to be pre-established because each state of a substance has a preceding state of that very substance as its real cause. The natural question that this prompts is: quite what are these states? Given the force/state equation, we can rephrase the question as follows: what is the nature of intrinsic force? This leads us to the final step of Leibniz's pre-established harmony.

3.4. Representation: the nature of intrinsic force and a component of pre-established harmony (against R. Sleight) (Step 4)

A. *Intrinsic force is representational power.* Here we come to an aspect of Leibniz's pre-established harmony that, as I would argue, is at least as important as his avowal of intrinsic causation. True, we have seen that, unlike the mere rejection of external causation, the ascription of intrinsic causal powers to substances is enough for Leibniz to distance himself from the occasionalist view. To that extent, intrinsic causation can be regarded as what is truly distinctive of Leibniz's theory.⁸⁴ However, it seems clear to me that in the absence of an explanation of what these causal powers are, Leibniz's pre-established harmony remains at a rather high level of generality: an explanation of how the communication of substances works is still missing.

As I see things, in Leibniz's mature metaphysics, the nature of the active force of substantial beings is interpreted in terms of *representational power* or *perception*.⁸⁵ Other scholars view things differently and prefer to construe substances' causal powers as

⁸⁴ See Brown (1984: 154).

⁸⁵ More on this 'representation/perception' equation will come later. We shall take it for granted for a moment.

appetitions.⁸⁶ There is no question that this is a plausible and appealing reading, with some powerful points in its favour. After all, Leibniz conceives of appetitions as tendencies or efforts, and tendencies or efforts seem much more straightforwardly linked to activity, not to mention causal activity, than perceptions.⁸⁷ However, there are good reasons which tip the scales towards perceptions too, and I think that, all in all, they outweigh those pulling in the other direction.

(i) First, we have just seen that Leibniz equates the force of substances with their states, and Leibniz is clear that the states of substances are perceptions: ‘the perception, which is the internal state of the monad representing external things’, we read in *PNG* § 4 (GP VI: 600/AG 208).⁸⁸ By contrast, the appetitions of a substance are identified with the tendencies towards states, rather than with the states themselves (GP VI: 600; GP III: 575).

(ii) Secondly, even if it is true that tendencies or endeavors appear *prima facie* to be better candidates for an active causal principle than perceptions, it is not at all true that Leibniz conceived of perception as something passive. This is borne out by a number of passages in which he contends that perception cannot be explained by ‘material attributes’ (GP III: 529) and ‘mechanical reasons’ (GP VI: 609), that is, I take it, attributes and reasons whose consideration reveals purely passive determinations.⁸⁹ It is also borne out by Leibniz’s claim, in a letter to Des Bosses of 1709, that perception is an ‘operation’ (*operatio*) (GP II: 72/LR 129), for operations can hardly be construed as something purely passive. Finally, in the Preface to the *New Essays*, Leibniz contends that his thesis that ‘no substance can lack activity’ is supported, indeed proven, by his thesis that ‘there are hundreds of indications...that at every moment there is in us an infinity of perceptions’ (NE

⁸⁶ On this side are Rutherford (2005: 166), Carlin (2006: 231), and Bolton (2013: 178). On the side of perception are McRae (1976: 47), Kulstad (1993a: 96), Jolley (1998), and Futch (2008: 168). On neither of these sides are Bobro/Clatterbaugh (1996) and Jorati (2015b), who think that a substance’s changes can only be brought about by the substance itself, rather than by its states, however one may wish to construe them. Lodge (1998: 294, n. 9) seems also to lean towards this position, though he does not elaborate.

⁸⁷ See Jorati (2015b: 394). For appetite as effort (*effort*), see NE 173. As tendency (*tendence*): NE 173, GP III: 575, GP VI: 598. Leibniz usually couples the notion of appetite with that of *conatus*. See NE 173, GP VII: 330. At GP IV: 550 appetitions are called ‘inclinations’ (*inclinations ou appetitions*).

⁸⁸ See also *Mon.* § 14 (GP VI: 608).

⁸⁹ See also L-SC 23. It must be admitted that this is not the only way of reading these passages. In saying that perception cannot be explained on the basis of ‘material attributes’ and ‘mechanical reasons’, Leibniz might have in mind the fact that such attributes and reasons fail to account for the idea of unity, an idea which, as we shall see, is integral to Leibniz’s conception of perception. For this view, see McRae (1976: 28). McRae does think, however, that Leibnizian perception is active (1976: 63 ff.).

53). This would make no sense had Leibniz regarded perception as something purely passive. Hence, for Leibniz, perception is active.

(iii) Thirdly, a careful analysis of Leibniz's definition of appetite does *not* decisively support the view that appetitions are the causes of substances' changes. The following definition, from *Mon* §15, is no doubt canonical:

The action of the internal principle which brings about the change (*L'action du princip interne qui fait the changement*)...can be called appetitions. (GP VI: 608/AG 214)⁹⁰

The phrasing of this sentence allows for two possible readings, depending on what we take to be the referent (*viz.* 'the action' or 'the internal principle') of the relative pronoun (*viz.* 'which') that introduces the subordinate clause (*viz.* 'which brings about the change') forming part of the complement of the subject of the sentence in question (*viz.* 'of the internal principle which brings about the change'). If the referent of 'which' is 'action', then our sentence will express the following proposition:

- (1) The appetite is an action and this action – i.e. the appetite – brings about changes.

Alternatively, if we take 'which' to refer to 'internal principle', the relative clause that the pronoun introduces will qualify 'internal principle', in which case we obtain this other, quite different proposition:

- (2) The appetite is an action of an internal principle and this internal principle – i.e. not the appetite – brings about changes.

Proposition (1) supports a causal construal, in the efficient sense, of appetitions. But (2) does not. For, if (2) is true, then the appetite would be an action *of* an internal principle, the internal principle itself being the cause of the changes of a substance. And both (1) and

⁹⁰ The omitted portion of this text runs: 'or passage from one perception to another'. This might give the impression that perceptions are effects. Hence, one might think, they are not causes. But even if perceptions are effects brought about by something, they can still bring about the resulting perceptions: *previous* perceptions can cause *succeeding* ones.

(2) are open possibilities. Of course, this does not entitle us to draw the conclusion that appetitions are *not* the principle of change of substances. Nor does it allow us to conclude that perceptions *are* the principle of change of substances.

And yet, (iv) fourthly, now consider these texts:

- [a] In fact, nothing can happen to us except thoughts and perceptions, and all our future thoughts and perceptions are merely consequences, though contingent, of our preceding thoughts and perceptions. (A VI, 4: 1550/AG 47; *DM* § 14)
- [b] The principle of change is in the dog...The representation of the present states of the universe in the dog's soul effectively produces in it the representation of the subsequent state of the same universe. (GP IV: 533/WF 78; to Bayle)⁹¹
- [c] But the operation proper to the soul is perception, and the nexus of perceptions, according to which subsequent perceptions are derived from previous ones, forms the unity of the perceiver. (GP II: 372/LR 129; to Des Bosses)
- [d] For it is plain that every simple substance embraces the whole universe in its confused perceptions or sensations and that the succession of these perceptions is regulated by the particular nature in the universe; and every present perception leads to a new perception. (GP VI: 356–7/H 364–5)
- [e] [T]here are other efforts, resulting from insensible perceptions...I call these 'appetitions'. (NE 173)

Taken together, I think these passages are good evidence that Leibniz regarded perceptions rather than appetitions as the causes of substances' changes. Let us put appetitions aside for a moment, focusing on perceptions only. Challenging the view I am defending – the 'efficacious perception view', as they call it – Bobro and Clatterbaugh claim that it "requires that one read terms such as 'consequence', 'lead', 'follow' and 'result' as causal language", which would (presumably) be problematic. Also, they claim, 'it requires one to overlook the fact that Leibniz *never* uses explicitly causal language' in connection with perception (1996: 415; emphasis theirs).⁹² This does not seem persuasive to me. To begin with, the latter claim is false. For, in [b], which Bobro and Clatterbaugh do not quote⁹³,

⁹¹ Woolhouse and Francks omit the adverb 'effectively' from their translation.

⁹² As noted earlier (n. 86), however, Bobro and Clatterbaugh do not think that appetitions are Leibniz's preferred candidates for the causes of the change in substances.

⁹³ Of the texts I quote, they quote [a], [b] and [d]. In addition to these, they also quote texts in which Leibniz says that the states of substances follow/result from preceding states (GP II: 47, GP II: 91–2, GP IV: 521). But these additional texts do not specify what exactly the preceding states are, whether perceptions or appetitions.

Leibniz explicitly describes representational powers as *effectively productive* (*produit effectivement*) of subsequent representations, and ‘production’, as noted earlier, is one of the terms Leibniz uses to define the efficient cause (A VI, 4: 546; A VI, 3: 451. Cf. n. 77). And this was not a slip of Leibniz’s pen. The same terminology is employed in *NS*, where Leibniz explains that the harmony of body and soul obtains ‘in virtue of the representative nature which was given to the [the soul] with its being for *production* (*produire*) at the relevant time’ (GP IV: 476/WF 26–7; my emphasis).⁹⁴ Once this is recognised, furthermore, Bobro and Clatterbaugh’s first claim turns out to be contentious. For why shouldn’t we read ‘consequence’, ‘lead’, and similar terms as causal language if Leibniz himself employs such language in some, in fact important, texts? The main insight governing the passages we are surveying seems to be fundamentally the same, so it is reasonable to interpret those passages in which Leibniz is not explicit about the meaning of his preferred terminology in light of those in which he is.

Turning now to appetitions, text [e] is particularly interesting. For, in [e], Leibniz not only uses the causal language – as I hope we are now allowed to say – of ‘result’ (*resultant*) in connection with perceptions, but even *subordinates* appetitions or efforts to perceptions: appetitions result *from* perceptions. It might be objected that ‘result’ could be read in purely finalistic terms: appetitions result from perceptions insofar as the latter provide the end towards which the former strive. This may be part of Leibniz’s view, but I doubt it is the whole of it.⁹⁵ For example, in his animadversions against Stahl’s *True Medical Theory* (1708–1710), Leibniz talks of the ‘representation of the end (*repraesentationem finis*) in a soul’ as an ‘efficient cause (*causam efficientem*)’ (L-SC 23; my emphasis). This suggests that even if one may feel inclined to see perceptions as final causes, their function would not be limited to that: they are also efficient causes. If we combine this with Leibniz’s claims in texts [a]–[e] and the arguments I have given in (i)–

⁹⁴ See also NE 54, where (minute) perceptions are said to have ‘efficacy’ (*efficace*), and GP IV: 522, where Leibniz says that ‘each preceding perception influences (*a de l’influence*) succeeding ones’ (WF 84).

⁹⁵ As a matter of fact, it would perhaps be more in keeping with the predominant tendency in Leibniz’s writings to say that (the goodness associated with) *appetitions* are final causes. See e.g. GP VI: 620, GP VI: 599, Robinet 421, C 472. For the view that appetitions themselves are final causes, see Carlin (2006: 232). But in other places Leibniz associates perceptions with final causes. See Bobro (2017: § 8). For an examination of the several interpretative difficulties and disputes surrounding Leibniz’s views on teleology, see Jorati (2015c).

(iii), it seems safe to conclude that the nature of the active force of substantial beings is, for Leibniz, representational power or perception.

B. *Perception and harmony (against Sleigh)*. In chapter 3, I shall put this conclusion at the centre of the discussion, so to avoid repetition I shall not say anything here about why Leibniz thinks of substances' activity as representational in nature. There is an issue related to the connection between representation and pre-established harmony that cannot wait so long for discussion, however. I contended in the heading of this subsection that representation is a component of pre-established harmony. Robert Sleigh has contended it is not.⁹⁶ The arguments he gives are sophisticated, and I will not be attempting anything so ambitious as a thorough assessment of them here.⁹⁷ But Sleigh's misgivings about the relevance of representation to pre-established harmony oblige me to do more than merely assert that the former is integral to the latter.⁹⁸ I conclude this section by offering my reasons for this assertion. One caveat is in order before proceeding. As is widely agreed in the literature, 'representation' and 'expression' (and their cognates) are, for Leibniz, synonymous terms.⁹⁹ So, I shall hereafter employ them accordingly. (A different matter is perception, which Leibniz distinguishes from representation/expression – although I shall argue that, in the contexts relevant to our present topic, representation/expression means perception. But we will come to that in due course).

First things first: my texts. Consider:

- [a] *Since* each [substance] accurately represents the whole universe in its own way and from a particular point of view...there will be a perfect agreement between all these substances. (GP IV: 484/WF 18; NS § 15)¹⁰⁰

⁹⁶ See Sleigh (1990: 138). This *is* what Sleigh expressly says (or at least unambiguously implies), though there is more to his view than it. More details will be given shortly and in chapter 2. In favour of seeing representation as a component of pre-established harmony are Russell (1937: 138) and McDonald Ross (1984: 97). Both of them take the claim for granted, however, without arguing for it.

⁹⁷ Such an assessment can be found in Wilson (2005).

⁹⁸ 'Relevance' is the (or at least one) right word here. Thus, Paul Lodge says that, for Sleigh, substances' representation 'is explanatory redundant with regard to our understanding of pre-established harmony'. See Lodge (1997: 9)

⁹⁹ Sleigh himself agrees with this. See Sleigh (1990: 217, n. 76). See also Kulstad (1977: 55), Rutherford (1995), Puryear (2010: 767). For passages supporting the equation, see e.g. GP IV: 484, GP II: 112.

¹⁰⁰ Emphasis added in this and all the ensuing texts.

- [b] Here now is the cause of the harmony found out. For God needs only to make a simple substance become once and from the beginning a representation of the universe, according to its point of view; since *from thence alone it follows that... it will always have a harmony among themselves*. (GP VII: 412/LC 85; ‘Fifth Paper against Clarke’, § 91; my emphasis)

- [c] But *since* all substances are continually produced by the sovereign being and express the same universe or the same phenomena, they correspond exactly. (GP I: 382/WF: 52; to Foucher, 1686)

- [d] And it is through [the system of correspondence] that we have at last the solution to the great problem of the union of the soul with the body or with an organized mass...The soul was created from the outset in such a way that all that the body can provide appears in the soul, *in virtue of* the representative nature which was given to it with its being (GP II: 476/WF 26; *NS* § 5, First Draft)

- [e] It can even be said that *by virtue of* these minute perceptions the present is big with the future and burdened with the past, that all things harmonise – *sympnoia panta*, as Hippocrates put it. (NE 55)

These texts are important not only because they establish a clear link between substances’ capacity to represent – embedded, in some of the passages, within the doctrine of universal expression – and pre-established harmony: they also make it plain that the former is supposed to *explain* the latter.¹⁰¹ Thus, Leibniz says that it is ‘*in/by virtue of*’ their representing the whole universe that things harmonise – [d] and [e] – and that, ‘*since*’ substances represent, they mutually agree or correspond – [a] and [c]. Consistent with this, text [b] goes even further, for it indicates that representation is all that is needed for things to harmonise. That is, substances’ representation is *sufficient* for harmony.

Now, throughout my discussion at Step 4 I have been using, admittedly somewhat loosely, ‘perception’ and ‘representation’ (or ‘expression’) as equivalent terms. To some extent, this seems acceptable, because texts [a]–[e] all deploy the same chief insight and formulate that insight in terms of expression/representation – in [a]–[d] – and perception – in [e]. Moreover, Leibniz sometimes uses ‘perception’ and ‘expression’ interchangeably in the same text.¹⁰² The fact is, however, that, as I anticipated, Leibniz distinguishes between expression/representation on the one hand, and perception on the other. Roughly speaking, *x* expresses/represents *y* if a consideration of the properties of *x* allows one to pass to the

¹⁰¹ Further (though admittedly less explicit) textual evidence for this can be found in GP II: 12, GP IV: 439, GP VI: 289–90, GP VI: 616, and GP VII: 316–7.

¹⁰² See GP IV: 484: ‘perceptions *or* expressions’ (*perceptions ou expressions*). See also A VI, 4: 1550.

properties of y : there is a structural isomorphism between x and y such that it is possible to map the properties of x onto those of y .¹⁰³ Perception adds an important proviso: x must be a *unity*. As Leibniz puts it in one text, ‘perception is nothing more than the expression of the many in the one (*nihil aliud [est], quam multorum in uno expressio*)’ (GP II: 331).¹⁰⁴ Mathematical objects, speech and maps all express yet do not perceive the items they refer to, for those items are not expressed in a unity.¹⁰⁵ So every perception is a representation, though not all representations are perceptions. Assuming, as I believe, that Leibniz regarded representation as integral to pre-established harmony, exactly which notion of representation was he thinking of? If mere or, as we may call it, ‘weak expression’ is the answer to this question, then perception might be unnecessary for there to be harmony, in which case it will not be a genuine component of pre-established harmony after all.

To the best of my understanding, Sleigh’s position on this matter is not entirely clear.¹⁰⁶ As I said above, at one point in his book he explicitly excludes universal expression from pre-established harmony (1990: 138). In another section, however, his view appears to be that expression – universal expression – *is* a necessary condition of pre-established harmony (and hence, I take it, a component of it) yet not a sufficient condition of it. And this, he argues, holds true irrespective of whether expression is understood as weak expression or in terms of the more demanding notion of perception: whenever there is harmony there is universal expression/perception, but neither universal expression nor universal perception entails harmony (1990: 173 ff.).

Whatever one’s take on Sleigh’s view may be, my stance on the issue at hand is this. First, I agree that

- (1) weak expression is not sufficient to yield harmony.

¹⁰³ Sleigh himself describes expression as ‘some kind of isomorphism, or partial isomorphism, of structure’ (1990: 174). Likewise, Swyer describes it as a ‘structure-preserving mapping’ property (1995: 82). For this notion of expression, see A II, 2: 231; A VI, 4: 1370; GP I: 383, C 15.

¹⁰⁴ See also GP III: 329, GP VI: 598, GP III: 575, A II, 2: 240; A II, 2: 231 – though Leibniz’s formulations are slightly different in some of these passages.

¹⁰⁵ For these and other examples of expressive items, see A VI, 4: 1370. See also GP VI: 617. For an examination of all the examples of expression given by Leibniz, see Kulstad (1977: 57).

¹⁰⁶ I say this with some trepidation, but there is at least one scholar of the calibre of Sleigh who seems to agree. See Lodge (1997: 8).

Harmony demands more than a mere structural isomorphism between the related items.
But, secondly, I think that

(2) perception *is* sufficient to yield harmony.

Further, I think that,

(3) in metaphysical contexts such as the doctrine of universal expression, expression *means* perception.

That is, there is no such thing as the doctrine of universal expression in Leibniz, where ‘expression’ is construed as weak expression: the doctrine of universal expression *is the doctrine of universal perception*. If this is right and (2) is true, it follows that

(4) universal expression is sufficient for harmony.

The burden of this reasoning rests on claims (2) and (3). Let us focus on them.

In fact, both claims are remarkably simple. Let us begin with (3), the claim that Leibniz’s doctrine of universal expression is really the doctrine of universal perception. We saw above that, according to one of Leibniz’s formulations, perception is expression or representation of ‘the many in one’ (rather than in expressive-yet-non-perceiving entities such as maps and mathematical objects). Here is another, more specific formulation of this view, featuring both in the draft of Leibniz’s letter to Arnauld of 9 October 1687 and in the actual letter:

In natural perception...what is divisible and material and dispersed into many entities [is] expressed or represented *in a single indivisible entity or in a substance which is endowed with genuine unity*. (A II, 2: 240/LA 144; my emphasis. Cf. A II, 2: 231)

This formulation is more specific than the previous one because it specifies that the unities Leibniz has in mind when talking of perception are *substances*.¹⁰⁷ And from this, I submit, (3) follows quite straightforwardly. For the doctrine of universal expression is, of course, a doctrine about *substances*. This is clear from several passages, including texts [a] to [c] quoted above and the following, which precedes [c] and dates from the same period as the formulation of perception just provided:

I believe that *every individual substance* expresses the whole universe in its own way, and that each of its states is a consequence...of its preceding one, as if there were only God and that substance in the world. (GP I: 382/WF: 52. To Foucher, 1686; my emphasis)

So, if perception is expression of the many in a substance, and if universal expression is a doctrine about substances, then universal expression is universal perception. That is, (3).

Once this is established, it remains for us to see why perception, as I affirmed in (2), is sufficient to yield harmony. Like (3), (2) partly springs from some elementary considerations about what perception is, namely that it is the expression of a multiplicity in a unity. Bearing this in mind, think of the following:

(5) ‘Harmony is unity in variety (*unitas in varietate*)’ (A VI, 4: 1358) or ‘unity in multiplicity (*unitas in multitudine*).’ (GP I: 232)

(5) is Leibniz’s general definition of harmony.¹⁰⁸ We shall observe that, on the face of it, and unlike his definition of perception, Leibniz’s account of harmony locates, so to speak, unity in multiplicity rather than multiplicity in unity. But this does not seem to convey any relevant difference, for in other places Leibniz is happy to phrase (5) so as to match almost exactly his definition of perception. Thus, in one piece, after saying that ‘harmony is unity in variety’ (A VI 4: 1358) – that is, (5) – he adds that ‘harmony is when many things are

¹⁰⁷ The adjective ‘natural’ before ‘perception’ in the quoted passage does not place any restriction on this. Its role is simply to underline the contrast between the perception of non-rational and rational beings, whose perceptions can be accompanied by consciousness (A II, 2: 240). In both cases, the perception occurs in a substance.

¹⁰⁸ As is well documented by Rutherford (1995: 21, n. 27) and Antognazza (2007a: xxi, 9–10, 45–7), this definition of harmony is repeated in several texts, including a letter to Arnauld of 1671 (A II, 1: 174). See A II, 1: 98; A VI, 1: 475; A VI, 1: 477; A VI, 1: 479; A VI, 1: 484–5; A VI, 2: 282, 283; A VI, 3: 116. For a late passage, see Leibniz’s letter to Wolff of May 18, 1715 (GLW 171–2).

gathered into some unity (*ad quandam unitatem revocantur*)' (A VI, 4: 1359; cf. A VI, 1: 484–5). This allows us to rephrase (5) as

(5*) harmony is variety in unity.

And, with (5*) in place, one cannot help concluding that, for Leibniz, it is just impossible that there be perception without harmony. For, if perception is expression of the many in a unity, then, given (5*), it is *definitionally* true that whenever there is perception, there is harmony: harmony is integral to perception. Further, since, as (3) has revealed, the doctrine of universal expression is the doctrine of universal perception, we can conclude that whenever there is universal expression, there is harmony. That is, (4).

4. *A formulation of the theory of pre-established harmony*

In the previous section, I have offered a four-step exposition of Leibniz's general theory of pre-established harmony. To sum up, these steps are the affirmation of universal agreement and denial of causal interaction (Step 1); the rejection of occasionalism (Step 2); the ascription of intrinsic, causally efficacious force to substances (Step 3); and the construal of this force as representational in nature (Step 4). On the basis of my exposition at each of these steps, we can now formulate Leibniz's theory as the conjunction of the following main components (C):

(C1) Every substance relates to every other substance in its universe.

(C2) The overall source of substances' relatedness is God.

(C3) The states of a substance are not the result of God's direct causal intervention.

(C4) Substances do not interact causally or depend externally upon each other.

(C5) The (non-initial) states of a substance are caused by the internal force/preceding states of that substance.¹⁰⁹

(C6) The internal force of a substance is representational force or perception.

(C1) is a general statement of the fact that substances are not detached entities but members of a collectively unified system: they form *a* universe. (C3) and (C4) are negative statements about what the ground of this fact cannot be. They distinguish Leibniz's theory from occasionalism and interactionism, respectively. (C2) and (C5) are positive statements about what the ground of substances' interrelation is, leaving undetermined, though, the nature of the force predicated in (C5). Finally, (C6) is a positive statement about the nature of this force. Thus (C2)–(C6) give content and greater specificity to the assertion, in (C1), that all substances are interrelated. Taken together, (C1)–(C6) provide a *definiens*, in terms of necessary and sufficient conditions, of pre-established harmony.

One might object that this formulation makes no mention of the notion of harmony and therefore can hardly be an adequate formulation of pre-established harmony, let alone a proper *definiens* of it. However, it should be clear at this point that the notion of harmony is implied by my preferred formulation. For (C6) contains the notion of perception and, as I have argued, the notion of harmony is integral to that of perception (pp. 51–3). Moreover, I have also argued that the pre-established character of harmony is explained, in two different senses, by (C2) and (C5) (pp. 42–3). So my formulation not only explains harmony but also the fact that it is pre-established. This being the case, I would even say that (C1)–(C6) is not only an adequate formulation of pre-established harmony. It is also better than many formulations I have come across in the literature. For many of these formulations either ignore the notion of harmony and only state the conditions under which harmony is pre-established, or else assume, without explaining it, the notion of harmony by introducing it under the guise of terms such as 'correspondence' or 'conformity'.¹¹⁰ So, in

¹⁰⁹ Here the qualifier 'natural' (besides 'non-initial') may be needed, but this will surely seem unnecessary to those who think that, whatever Leibniz's intentions, there is no room for miracles in his system. We dwell on this in chapter 4. For the meantime, I leave (C5) as it stands.

¹¹⁰ For a formulation liable to the first charge, see Mercer/Sleigh (1995: 100). Cf. Lodge's comments on it (1998: 294, n. 9). Liable to the second charge is Bobro (2017: § 1). In fairness to these authors, however, I should mention that they do not expressly claim their formulations to provide the necessary and sufficient conditions of pre-established harmony.

sum, (C1)–(C6) appear to provide us with an adequate, preferable and fairly complete formulation of Leibniz’s pre-established harmony.¹¹¹

And yet, there is one more thing I want to add; namely,

(C7) there is a plurality of substances in the universe.

Prima facie, this might seem odd at best and redundant at worst. Odd because we would most naturally think of (C7) as integral to Leibniz’s metaphysics in general rather than to his pre-established harmony in particular. Redundant because, if (C1) is true, then (C7) is trivially so. However, we have seen above that, as Leibniz views things, the impossibility of metaphysical pluralism is a direct implication of occasionalism – occasionalism implies substance monism – and the pre-established harmony is quite closely related to occasionalism indeed. Thus, in a letter to L’Hospital of 1695, Leibniz goes as far as to say that he owes the ‘foundations’ for his ‘theory of concomitance’ to occasionalism, particularly to Malebranche (GM II: 299).¹¹² Furthermore, ever since Leibniz’s lifetime, the theory of pre-established harmony has often been judged to come dangerously close to Spinoza’s monistic outlook. According to the Cartesian Ruardus Andala’s *Dissertationum philosophicarum pentas* (1712), for example, Spinoza’s monistic doctrine is the ‘closest parent’ of Leibniz’s pre-established harmony.¹¹³ And in his recent monograph *Leibniz lecteur de Spinoza*, Mogens Laerke points out that, at least during a certain period, ‘Leibniz seriously envisaged the possibility of a system of parallelism...in which the mind and its ideas agree with the body and its states because they are modifications of one and the same substance’ (2008: 759).¹¹⁴ So here we have at least two good reasons for

¹¹¹ Indeed, (C1)–(C6) is more complete than any other formulation I am aware of. Compare Jolley (1993: 392), Cottingham (1988: 109), Mercer/Sleigh (1995: 100), Kulstad (1993a: 97), Watkins (1998: 137), Schönfeld (2000: 140), Bobro (2017: § 1). Although some of these formulations are more austere than others, all of them omit (C6). Contrastingly, see Rutherford (1995: 36), who duly emphasises the relevance of perception to harmony.

¹¹² See also *NS* §§ 12–13 (GP IV: 483) and Leibniz’s (undated) letter to Jaquelot (GP III: 468).

¹¹³ Quoted in Laerke (2008: 48). Similar appraisals are found in Joachim Lange’s *Causa Dei et religionis naturalis adversus atheismum* (1727) and François Pluquet’s *Examen du fatalism* (1757). For these and further references, see Laerke (2008: 49 ff.). See also Belaval (1995: 120–1).

¹¹⁴ That, despite his intentions and remarks to the contrary, Leibniz’s philosophy might/does end up collapsing into Spinozism has been pointed out by many Leibniz and Spinoza scholars. See Russell (1937: xi), Freudenthal (1927: II, 223), Boss (1990: 179), Garret (1990: 14), Cover/O’Leary-Hawthorne (1999: 253). Not all these scholars explicitly refer to the pre-established harmony in particular, however. For the full picture, see Laerke (2008: 48 ff.). We dwell on the topic of Leibniz and monism in chapter 3.

including (C7) among the components of pre-established harmony, or, at any rate, for seeing (C7) as importantly related to it.

Conclusion and Transition to Chapters 2 to 4

In this chapter, I have set forth the essential steps of Leibniz's pre-established harmony. This has allowed me to disentangle the main component of the theory, the conjunction of which provides the necessary and sufficient conditions for it. But very little has so far been said about Leibniz's reasons for these components. Of course, I have given my reasons for interpreting some of the propositions in (C1)–(C7) in one way rather than another. Also, when needed, I have given my reasons for thinking of these propositions as proper components of pre-established harmony. But why does *Leibniz* think that (C1)–(C7) obtain? Where do they, and hence the pre-established harmony, come from? The three following chapters aim to subject the pre-established harmony to a deeper analysis, addressing the grounds on which the theory is built.

At the beginning of this study, we saw that in some important texts Leibniz draws a very strong link between the theory of pre-established harmony and his notion of substance: the former is a consequence of the latter.¹¹⁵ Also, I noted there that, according to a long-standing line of interpretation going back as far as Couturat (1901) and Russell (1937), the key unlocking Leibniz's inference from his notion of substance to the pre-established harmony lies in the complete-concept theory of substance and thus ultimately in the conception of truth as containment of the predicate in the subject – what I dubbed the 'logician view' of pre-established harmony.

Taken as a whole, chapters 2 to 4 are meant to be a unitary argument against this view. As I said earlier, in attempting this there is no denying that Leibniz's logical doctrines have a bearing on his pre-established harmony. What will emerge, rather, is a relocation of the more markedly logical strand of Leibniz's metaphysics to a particular, and indeed rather limited, domain in which it exerts its influence. That domain is defined by (C1) – universal relatedness – and (C4) – the rejection of substances' external dependence – the two components of pre-established harmony with respect to which, as I argue in chapter

¹¹⁵ See Introduction, p. 9. See also chapter 2, section 1.

2, the logicist interpretation can be said to succeed. This, however, stops a long way short of celebrating that interpretation. For, in chapters 3 and 4, I argue that it fails to provide us with a satisfactory explanation of the two key components (C6) – perception – and (C5) – spontaneity. As for (C3) – the rejection of occasionalism – and (C7) – ontological pluralism – I shall not give them independent treatment in this study: the latter is built into my discussion of the provenance of substances' perception in chapter 3, and the former goes hand in hand with Leibniz's thesis of spontaneity, the topic of chapter 4. So, to be clear, the structure of what follows is this: chapter 2 covers (C1) and (C4), chapter 3 covers (C6) and (C7), and chapter 4 covers (C5) and (C3). (C2) – God as the overall source of harmony – will play its part in chapter 5.

CHAPTER 2

Universal Relatedness without External Dependence: The ‘Logic’ of Pre-established Harmony

1. *Breaking down Leibniz’s inferences: two components of universal expression*

On many occasions and in various ways, Leibniz advances the thesis that every substance relates to every other substance in the universe in which it exists.¹¹⁶ Although the mere fact that substances are interrelated might arguably be claimed to involve less than is required for their harmonious interrelation to obtain, there can be no question that Leibniz took the harmony among substances to obtain *universally*. As he puts it in one important text, ‘*all things in the universe are in mutual harmony*’ (*CDa*, § 41; GP VI: 445, my emphasis).¹¹⁷ The significance of this point can hardly be belittled. On Leibniz’s view, the harmony of the universe can only be recognised through a consideration of the universe as a *whole*, and God’s justice and goodness can only be acknowledged by appreciating the harmony of the universe.¹¹⁸ A significant part of Leibniz’s project of theodicy, then, seems to rest on the premise that all things are related: ‘the universe, whatever it may be, is all of one piece, like an ocean’ (GP VI: 107/H 128).

But where does the universality of substances’ interrelation come from?

Consider these three Leibnizian doctrines:

- (i) Every substance has a complete individual concept.
- (ii) Every substance expresses every other substance in the universe.
- (iii) Every substance is in a pre-established harmony with every other substance in the universe.

Many writings from the 1680s give the impression that Leibniz viewed these three doctrines – the complete-concept theory of substance, universal expression and pre-established harmony – as related to one another in such a way that (i) entails (ii), and (ii), in

¹¹⁶ See NE 227, GP VI: 107, GP VI: 617, GP VI: 627, GP VII: 301, GP VII: 311; A VI, 4: 1541; C 8.

¹¹⁷ Translation in Rutherford (1995: 19, n. 9). See also GP III: 635–6, GP VII: 306.

¹¹⁸ See C 535. For an elaboration and discussion of these points, see Rutherford (1995: 7–21).

conjunction with (i), entails (iii).¹¹⁹ We can put this inference in the form of the following derivation scheme:

Scheme 1: (i) conceptual completeness \rightarrow (ii) universal expression \rightarrow (iii) pre-established harmony.

In his classic book, *Leibniz and Arnauld*, Robert Sleigh has posed the question of how to interpret the entailment relations embodied in this scheme. After having addressed it in the rigorous manner that is so characteristic of his study, he leaves us with a rather discouraging outcome: ‘I have wrestled with these matters for some time and I have lost. My hope is that [my discussion] will motivate someone to step forward and explain these topics properly’ (1990: 171). I shall not take up the challenge in the form that Sleigh presents it. The reason for this is that I do not believe that the sequence of thought set out in Scheme 1 really captures Leibniz’s views on pre-established harmony’s grounds. In particular, I do not believe that Leibniz regarded pre-established harmony as a logical consequence of substances’ property of conceptual completeness, whether of that property alone or via the intermediate premise that every substance expresses every other substance. I do believe, however, that Scheme 1 encapsulates a somewhat different, narrower sequence of thought that provides an answer to the question posed above.

To explain this, let me concentrate for a moment on the doctrine of universal expression, free of attendant doctrines. According to this doctrine, every substance expresses – or perceives, as I have argued in chapter 1¹²⁰ – all other substances in the universe in which it exists. There are *two* doctrines here or, at any rate, two distinguishable components of one doctrine. For it is one thing to say that

(1) every substance expresses *all* other substances in the universe;

it is quite another to say that

¹¹⁹ See e.g. A VI, 4: 1541 and A VI, 4: 113. For more references, see Sleigh (1990: 170).

¹²⁰ See section 3.4 of that chapter.

- (2) every substance *expresses* all other substances in the universe.

Let us call these propositions the ‘Universality Component’ and the ‘Perception Component’ of universal expression, respectively. The Universality Component emphasises the universal scope of the interrelation of substances: ‘*all* is connected in the universe’ (NE 227, GP VI: 107). But the Perception Component goes beyond this. In particular, it specifies the nature of the mechanism through which the interrelation of substances obtains: all is connected *through perception*. Of course, Leibniz has reasons to believe that, as it obtains in this best possible world, the interrelation of substances satisfies the demands of both the Universality Component and the Perception Component, that is to say, it is both universal *and* representational. But universal interrelatedness and representational interrelatedness are distinguishable ideas. For example, a proponent of real interaction may well accept that the force of a body propagates itself through the whole universe without having to accept that bodily forces are representational in nature. Or, to take another case in point, consider the property of compossibility. This property ranges over all the members comprising a universe, for no member of a universe can be logically incompatible with any other member of that universe. However, that compossibility entails expression is far from obvious. For instance, Catherine Wilson has rightly pointed out that compossibility is an ‘all-or-nothing’ relation – things are either logically consistent or they are not – whereas expression comes in degrees – things can express one another more or less. Furthermore, expression has a cognitive dimension that compossibility lacks.¹²¹ If this is so, then it is possible to conceive of kinds of relations – such as real interaction and logical compossibility – that obtain universally and yet are not representational in kind.

With this distinction in mind, let us revert to Scheme 1. If universal expression – the intermediate stage in Scheme 1 – can be split into the Universality Component and the Perception Component, then that scheme can be seen as a complex sequence comprising *two* different sub-schemes. The first of these sub-schemes will represent an inference from

¹²¹ See Wilson (2005: 108). See also Sleight (1990: 171–3). This is not to say that compossibility lacks a cognitive dimension, but only that it lacks *the* cognitive dimension that *expression* has. For instance, the compossibility of two substances allows us to know that all their properties are logically consistent. But expression delivers more than that. Circles (*qua* circles) do not express squares (*qua* squares) because the properties of a circle cannot be mapped onto those of a square. But squares and circles can of course coexist in the same universe.

the complete-concept theory of substance to the Universality Component of universal expression and then to the universality of substances' mutual harmony. Since the second and third stages of this inference concern the same notion – universality – differing only as to their corresponding complements, we can simplify it by saying that conceptual completeness delivers the Universality Component (which is integral to both universal expression and universal harmony). That is:

Scheme 2: (i) Conceptual completeness \rightarrow (iv) Universality Component (of universal expression/harmony).

On the other hand, the second sub-scheme involved in Scheme 1 will represent an inference from the complete-concept theory of substance to the Perception Component and then to the notion of harmony:

Scheme 3: (i) Conceptual Completeness \rightarrow (v) Perception Component \rightarrow (vi) Harmony.

Scheme 3 is not only different from Scheme 2; it is also more complex. It raises, in particular, two questions. The first is whether perception can be seen to flow from substances' property of conceptual completeness – whether (i) entails (v). The second question is whether perception yields harmony and, if it does, how it is supposed to do so – whether (v) entails (vi), and how.

In chapter 1, section 3.4, I have given my answer to the second of these questions. In short, recall, I argued there that perception does deliver harmony and that this is so by virtue of the very definitions of perception and harmony. In chapter 3, however, I shall argue that Leibniz's construal of the force of substances as representational power derives from his view of the relation between God and creatures and, more particularly, from his account of creation as God's emanating limited version of his absolute attributes, among which there is 'infinite perception'. I shall give my arguments and textual evidence for this claim in due course. If we tentatively accept it, however, the conclusion that follows is clear: Scheme 3 breaks down as soon as it begins – in the transition from (i) to (v).

But the situation is different, or so I want to argue, in the case of Scheme 2. Although I do not think that the connection between conceptual completeness and the Universality Component is as straightforward as Scheme 2 may suggest at first, I do think that, in combination with considerations about truth, the idea of conceptual completeness can equip us with all the necessary materials for drawing a coherent and fairly complete picture of Leibniz's reasons for thinking of the interrelation between substances as universal. And my goal in this chapter will be to substantiate this claim. Well, in fact, the claim is slightly more complicated and so too is my goal. For, as we know from chapter 1 and as the title of the present chapter reveals, Leibniz conceives of universal interrelatedness in such a way that, while it is true that all substances are interrelated in the universe, it is false that substances are externally dependent on each other: bereft of 'windows', 'each substance is like a world apart, independent of all things, except for God' (A VI, 4: 1550/AG 47). So, more precisely, my aim in this chapter will be to argue that truth and conceptual completeness – what constitutes the 'logical' side of pre-established harmony – deliver the two claims, integral to pre-established harmony, that all substances are interrelated – (C1) in my formulation of pre-established harmony in chapter 1 – and that no finite substance is externally dependent on any other finite substance – (C4).

The way in which truth and conceptual completeness combine to achieve these claims is somewhat complex, so it will be helpful to be clear on the chief lineaments of my argument from the outset. My point of departure is provided by a passage from the *PL-M*, a piece often seen as the best token of the logical foundations of Leibniz's metaphysics:

Every individual substance involves in its perfect notion the entire universe and everything that exists in it, past, present, and future. For there is no thing on which one cannot impose some true denomination from another thing, at very least a denomination of comparison and relation. But (*autem*) there is no purely extrinsic denomination. I have shown the same thing in many other ways, all in harmony with one another. (A VI, 4: 1646/AG 32–3; trans. altered)¹²²

This passage offers an argument of two premises, namely,

¹²² Ariew and Garber translate the conjunction 'autem' in the fourth line as 'moreover'. It seems to me that this conceals the force of the premise that the conjunction introduces – i.e. the thesis that there are no purely extrinsic denominations – which I take to be *adversative*: its role, as we shall see, is to qualify the results obtained through the premise in the previous sentence. So, it should not be seen as merely juxtaposed to that premise. In agreement with this appears to be Parkinson, who also opts for 'but'. See MP 90.

- (3) ‘there is no thing on which one cannot impose some true denomination from another thing, at very least a denomination of comparison and relation’,

and

- (4) ‘there is no purely extrinsic denomination’.

The conclusion, featuring in its first sentence, is expressed as follows:

- (5) ‘[e]very individual substance involves in its perfect notion the entire universe and everything that exists in it, past, present, and future’

Now, as I read it, this conclusion contains, in turn, two parts, namely that (note and bear in mind the italics)

- (5a) every substance involves the *entire universe (totum universum)*,

and that

- (5b) every substance *involves (involvit)* the entire universe.

(5a) is in essence our Universality Component, the thesis of universal relatedness. (5b), on the other hand, is the idea that substances are not externally related: the interrelation among substances is *internalised* or included in each of the related substances.¹²³ How do truth and complete concepts, then, enter into this picture? Although I think that they intermingle in Leibniz’s argument for (5) as a whole, I want to propose that the argument in (3)–(5) deploys in fact two recognisably different patterns of inference, with truth and conceptual

¹²³ In fact, to anticipate a little, I shall argue in section 3.3 that what follows from the internalisation of universal relatedness is not the inclusion of relations (either of relations simpliciter or relational accidents) in substances, but rather the inclusion of the *absolute* (i.e. non-relational) ‘foundations’ from which relations result.

completeness performing their own distinctive functions in connection with these patterns. The first pattern goes from premise (4) – the no-purely-extrinsic-denomination thesis – to (5b) – the insertion of universal relatedness in substances – and I shall argue that it is in connection with this pattern that conceptual completeness is particularly relevant: (4) derives from conceptual completeness. The second pattern goes from (3) – the thesis that ‘there is no thing on which one cannot impose some true denomination from another thing’ – to (5a) – universal relatedness – via considerations of truth. So the structure that emerges is this: truth and conceptual completeness ground, respectively, premises (3) and (4) of Leibniz’s argument for the conclusion in (5), and these premises ground, respectively, parts (5a) and (5b) of that conclusion. Admittedly, this is not a proper vindication of the original inference in Scheme 1. But it vindicates part thereof. Or so I hope to do. We begin with truth, (3), and its bearing on (5a). Next, in section 3, we turn to complete concepts, (4), and (5b).¹²⁴

2. Truth and universal interrelation

Maybe because Leibniz’s argument in (3)–(5) is so clear and straightforward in appearance, discussions of it do not usually spend a lot of time trying to tease out what exactly its starting point, namely (3), means.¹²⁵ For example, both Daniel Garber (2009: 185–6) and Robert Sleigh (1990: 175) suggest that (3) is the premise that ‘all things are connected’.¹²⁶ This is surely too hasty. The reason is clear. If my reading of the passage from *PL-M* reproduced above is on the right lines, then the connection of things cannot be a *premise* of Leibniz’s argument because it is *part of its conclusion*: to say that all things are connected is only a way of rephrasing the idea, asserted by (5a) and embedded in (5), that every

¹²⁴ One might observe that, if I succeed in showing all this, we shall be in possession of a ‘logical’ explanation not only of universal relatedness and the negative claim that substance are not externally dependent – i.e. (C4) in my formulation of pre-established harmony – but also of the positive claim that substances’ states arise from within their own natures – i.e. the thesis of spontaneity in (C5). However, I shall argue in chapter 4 that more than complete concepts and considerations of truth are required in order to get at an adequate understanding of Leibnizian spontaneity.

¹²⁵ By contrast, of course, its second premise – the no-extrinsic-denomination thesis – has been the subject of much debate.

¹²⁶ This is Sleigh’s phrasing. Garber formulates (3) as the thesis that ‘each individual bears some relation to all of the other things in which it exists’ (2009: 185). This does not affect the critical remarks I am about to make.

substance relates to the entire universe.¹²⁷ So, if we do not wish to charge Leibniz's with a flagrant *petitio principii*, (3) must be interpreted in such a way that it does not presuppose the universal connection of things: it must ground it.

Such an interpretation can be accomplished provided we recognise two points about (3). In A and B, I shall begin by explaining what these points are. Then, in C, I shall explain how they combine to achieve a non-question-begging reading of Leibniz's inference from (3) to (5a). This will raise a problem that will lead us from that inference to Leibniz's derivation of (5b) from (4).

A. (3) is a logical premise. Let us bring the premise under discussion to the fore once again:

- (3) 'there is no thing on which one cannot impose some true denomination from another thing, at very least a denomination of comparison and relation'.

(3) speaks about *denominations*. To the best of my knowledge, Leibniz's texts do not provide us with a definition of denomination.¹²⁸ However, commentators are usually confident that an account of *denominatio* can be extracted from the way in which Leibniz employs the term. A particularly useful one is given by Benson Mates, and I shall draw on it:

In the so-called region of ideas, the counterparts of declarative sentences are propositions or thoughts; correspondingly, the counterparts of definite or indefinite descriptions (or abbreviations of such) are denominations. Thus, the ontological status of denominations is that of concepts; in short, a denomination is a kind of concept. (1986: 218)

¹²⁷ This is not to deny that there are other texts in which Leibniz employs the connection of things as a premise of arguments leading to conclusions that resemble (5). See e.g. the last portion of *DM* § 8, where the connection of things features as a premise of an argument to the conclusion that substances involve 'traces of all others substances' (A VI, 4: 1541). See also A VI, 4: 1618, 16–23. Both Sleight and Garber refer to these passages in support of their reading of (3).

¹²⁸ A definition, in fact, occurs at A VI, 4: 2089. But here Leibniz is reproducing Thomas White's definition in his *Euclides Physicus* rather than presenting his own definition. See also A VI, 4: 1131, where *denominatio* is equated with *apellatio* and *accepio*. Apart from these, all the occurrences of 'denomination' that I was able to identify are in contexts where Leibniz either simply uses the term without explaining its meaning (e.g. A VI, 4: 572, 759, 769, 1083, 1131 NE 227; A VI, 4: 1503, 1618, 1645–6, 2094) or talks of *types* of denominations (e.g. A VI, 4: 1240: *denominatio adhaerens*; A VI, 4: 633: *per circumstatiam*; A VI, 1: 86: *extrinseca/intrinseca*; A VI, 4: 1291: *concreta*).

Mates is emphatic here that the status of denominations is that of *concepts*. As the counterparts of (definite or indefinite) descriptions featuring in propositions expressed by declarative sentences, denominations are, more specifically, predicate concepts.¹²⁹ This is relevant to our concerns because, *qua* concepts, denominations must primarily belong to the *logical* realm or to the level of thought: ‘A *notio, conceptus, idea* is a thought (*cogitatio*) insofar as it is a thought of something’ (NE 488). This logical construal of denomination is in keeping with Leibniz’s use of the term. To Arnauld, for example, he writes that ‘the concept of an individual substance contains all its denominations’ (A II, 2: 80/LA 63), where he could well have written, as he often does, ‘predicates’ instead of ‘denominations’.¹³⁰ It is also borne out by Jungius’ terminology in his *Logica* – Leibniz’s favourite logical textbook¹³¹ – where the more markedly ontological notion of ‘inhering’ in a subject is contrasted with the more markedly logical idea of ‘denominating’ a subject.¹³²

Now, if denominations belong to the logical sphere – and this is the first thing about (3) that must be recognised – then it is plausible to conclude that (3), which speaks about denominations, is primarily a logical premise. Of course, this is not to say that (3) cannot have ontological implications. But the implications *of* (3) are not (3) itself: as a *premise* of Leibniz’s argument, (3) articulates a logical claim or a claim about concepts. Hence, *pace* Garber and Sleight, (3) cannot be the connection of *things*. More generally, (3) is not the claim that there are relations obtaining between the substances which exist in a universe. I should clarify that what I am saying here does not stem from any consideration of Leibniz’s views on the status of relations: that comes later in his argument, particularly with (4).

¹²⁹ The specification is not trivial, for the fact that denominations are concepts does not automatically turn them into predicate concepts: there are also complete individual concepts (e.g. Alexander the Great). But I think Leibniz would not say that this kind of concept is a ‘denominatio’. He would rather say, I surmise, that these concepts *are denominated* by a denomination or predicate concept. See e.g. A VI, 4: 1645–6: ‘Oportet enim ut notio subjecti denominati involvat notionem praedicati’.

¹³⁰ See e.g. A VI, 4: 1645–6. See also A VI, 4: 1182 and A VI, 4: 633, where *denominatio* and *praedicatum* are used interchangeably.

¹³¹ On the importance of Jungius to Leibniz, see Kangro (1969), Mates (1986: 211), Mugnai (1992: 75–85). Leibniz diligently studied his *Logica*. See A VI, 4: 1048 ff. His admiration for the German logician and philosopher is eloquently expressed in a passage from *De numeris characteristicis as linguam universalem constituendam* of 1679: ‘Joachim Jungius...a man...of such judiciousness and such capacity of mind that I know of no other mortal, including even Descartes, from whom we could better have expected a great restoration of science, had Jungius been either known or assisted’ (A VI, 4: 266/AG 7).

¹³² See *Logica*, Logica Generalis, L. I, C. VII, 5. See also Le Roy, *Floretum*, ‘Denominatio’, p. 61, where ‘denomination’ is defined as ‘enuntiatio seu predicatio’. Le Roy’s *Floretum* was published in Paris, 1649. Leibniz may have known it.

What I am saying, rather, is that, unlike the doctrine of the connection of things, (3) does not articulate an ontological thesis about intersubstantial relations – however the nature of these relations may be construed – because it is not an ontological premise but a logical one.

But quite what logical premise is (3)?

Two points must be noted. (i) If we go back to (3), we shall notice that it speaks not only about denominations but actually about *true* denominations and, more particularly, about true denominations that can be ‘imposed on one thing from another thing (*ex alia*)’. Denominations imposed on, or attributed to, something ‘from another thing’ are relational denominations or extrinsic denominations – for instance, a denomination of comparison, as (3) explicitly mentions.¹³³ So, if we connect this with the fact that, as I have shown, denominations belong to the logical realm or to the level of thought, then we can conclude that (3) is the premise that we can think, with truth, of things as related. In other words, it is possible to construct true relational propositions – propositions having relational denominations as predicates – about the substances existing in a universe.

(ii) But there is more. For, as a matter of fact, (3) not only speaks about true denominations that can be imposed on one thing from another thing – about true extrinsic denominations. Conspicuously, it also makes it clear that, in Leibniz’s opinion, these true extrinsic denominations can be imposed on *all* things: there is ‘*no* thing’ on which we cannot impose some true relational denomination. That is, the *relata* of these constructible true relational propositions can be satisfied by *any* substance existing in the universe. For instance, in a universe comprising substances *a*, *b* and *c*, it is possible to construct *aRb*, *aRc*, *bRc*, and so on, in such a way that these propositions come out true.¹³⁴ So, if we put together all the pieces disentangled so far, we can conclude that (3) is the premise that

¹³³ See e.g. Jungius, *Logica*, Logica Generalis, L. I, C. VIII, 3–4, who defines *relata* as terms ‘which are said to be what they are of something else (*quod sunt, aliorum esse dicuntur*) or which in some manner or respect refer to something else (*ad alium referitur*)’.

¹³⁴ One might object that the validity of this point depends on how R is interpreted. Suppose R is the relational predicate ‘being father of’. On this interpretation of R, Leibniz’s point (or rather my point about Leibniz) seems false: if it is true that ‘*a* is the father of *b*’, the reverse cannot hold. As I see it, however, Leibniz’s point is that it is always possible to construct ‘*some*’ relational proposition in which the *relata* can be satisfied by any substance. In this sense, it is significant that Leibniz mentions denominations of comparison (e.g., similarity/dissimilarity), a kind of relational predicate of universal applicability. On relations of comparison, see A VI, 4: 944, NE 62, 358. For discussion, see Mugnai (1992: 72–5). See also Rescher (1981: 78–9, n. 13).

(3*) it is possible to think, with truth, of things as *universally* related.

B. *Truth and reality*. (3*) sums up my view of premise (3) of Leibniz's argument in *PL-M*. But this view poses a problem. For, according to my suggested reading of that argument, the role of (3) is to yield the Universality Component in (5a). And, unlike (3*), the Universality Component does articulate an ontological thesis, namely the thesis that all *substances* are interrelated. How can we bridge this gap between logic and metaphysics? The answer to this question is, of course, complicated, bearing as it does on the issue of whether Leibniz's philosophy should or should not be seen (and, if so, in what sense and to what extent) as a rationalist philosophy. I shall have more to say about this in chapter 3. Here we shall move quickly and content ourselves with a rather simple assertion: ostensibly, and at least in certain contexts, Leibniz is happy to bridge the gap between logic and metaphysics. This is clear from the famous § 8 of *DM*, where the conclusion that substances are complete *beings* is extracted from the premise that substances have complete *concepts*, which in turn is extracted from the premise that truth is containment of the predicate in the subject (A VI, 4: 1540–1; cf. A VI, 4: 1542; GP VII: 316; A VI, 4: 1507). And the same sequence of moves is apparent in *PL-M*: from predicate containment (A VI, 4: 1644) to complete concepts (A VI, 4: 1646) to substances.¹³⁵ Now, what makes this sequence relevant for my present purposes is that it indicates that Leibniz was committed to the view that, for a proposition about an individual substance to be true, not only the predicate (logically construed) must be contained in the subject (logically construed); the *property* expressed by the predicate must, in some manner, be contained in the *substance* which figures as the logical subject of the proposition. Garber, with whom I completely agree on this point, puts it well: '[for Leibniz,] true predication about individual substances requires not just a foundation in the concept of the subject but in the *subject itself*' (2009: 186; my emphasis).¹³⁶ If we put aside for a moment the 'containment' aspect of Leibniz's

¹³⁵ To be precise, in *PL-M* there is no explicit mention (as far as I could see) of the claim that substances are complete beings. But the claim is unambiguously implied, for statements about the notions of substances turn at many places into statements about substances themselves. See e.g. A VI, 4: 1646, 22 ff.

¹³⁶ In keeping with the general tenor of this seems to be a later passage from the *New Essays*: 'It would be better to assign truth to the relationship amongst the *objects (objets)* of the ideas, by virtue of which (*qui fait*) one idea is or is not included within another' (NE 397; my emphasis). See also A VI, 4: 19; A VI, 4: 45; A VI, 4: 281.

conception of truth (on which more later), what remains is the following general idea, which is the second point about (3) that must be recognised:

- (7) true propositions about individual substances must correspond with ontic facts about those substances.

With respect to this, it is worth noting that when Leibniz presents the predicate-containment theory of truth in *PL-M*, he allies himself with Aristotle: ‘The predicate or consequent [of an affirmative proposition] is always in the subject or antecedent, and the nature of truth in general or the connection between the terms of a statement, consists in this very thing, as Aristotle has also observed’ (A VI, 4: 1644/AG: 31; cf. A VI, 4: 776). Taken at face value, this conception of truth seems not very much like Aristotle’s, for whom truth is ‘to say of what is that it is, and of what is not that it is not’ (*Met.* Γ 7, 1011b27). But Parkinson suggests – rightly, to my mind – that Leibniz may well have taken Aristotle to mean this: to say truly ‘S is P’ is to say that ‘P’ is contained in ‘S’ *when P is contained in S* (MP 205, n. b). If this is correct, then the containment theory of truth should not be seen as opposing Aristotle’s but actually as incorporating one of its driving insights: there must be an objective foundation on the basis of which the reason for truth can be given.

C. From (3) to (5a) and transition to (4). My remarks in A and B provide us with the necessary materials for a non-question-begging interpretation of the first inferential pattern I have distinguished in Leibniz’s argument in (3)–(5), namely the one moving from (3) to universal relatedness. We can put Leibniz’s inference as follows. First, since, as (7) reveals, true propositions about substances must correspond with ontic facts about those substances and, as we have seen in A, true relational propositions can actually be constructed, substances must be interrelated. Second, since, as we have also seen in A, true relational propositions – on at least some interpretation of the relations predicated in the sentences expressing those propositions – can be constructed in such a way that their truth does not depend on which substances are taken to stand for the *relata*, substances’ interrelation must be universal: every substance in a universe relates to every other substance in that universe. That is, (5a).

But there is a fairly obvious difficulty with this reading: it is consistent with, and indeed suggests, the view that true relational propositions are made true by substances' real external relations. Yet, for Leibniz, there are no such relations.¹³⁷ Hence, real external relations cannot function as the truth-makers of true relational propositions. However, we know from (7) that the constructability of such propositions requires the universal interrelation of substances. So, we are placed before something of a paradox: on the one hand, there are no external relations; on the other, there are logical facts the very possibility of which appears to demand such relations.

It is here that (4) enters into play: '*but* there is no purely extrinsic denomination'. We turn now to this premise. One common way of addressing (4) places Leibniz's logico-grammatical analyses of relational sentences into (sets of) non-relational ones at the centre of the discussion. For those who regard such analyses as successfully achieving their end, the import of Leibniz's view is that the truth of a relational sentence is entailed by, or can be inferred from, the truth of the non-relational sentences into which it is analysed. Ontologically phrased, external relations *supervene* on properties of the individuals standing for the *relata* of relational sentences.¹³⁸ The view I shall advocate lines up with the entailment/supervenience view. But it departs from the logico-grammatical approach. While I have nothing serious to say against this, as it were, 'formalist' approach, I believe it significant that Leibniz *never* adopts it in those contexts where (4) is at stake.¹³⁹ Moreover, and perhaps more significantly, Leibniz *does* favour us with arguments which expressly deploy (4) as a conclusion. This suggests that a better, or in any case more direct,

¹³⁷ For canonical statements of Leibniz's denial of the reality of external relations, see GP II: 486, GP II: 517, GP V: 132, A VI, 4: 28; A VI, 6: 227; A VI, 6: 265. We dwell on this in the next section.

¹³⁸ Classical treatments of Leibnizian reducibility in terms of entailment (truth-inference)/supervenience include Mates (1986: 215–8), Cover (1989), Sleight (1990: 75–8), and Cover/O'Leary-Hawthorne (1999: 83–5), among others. A different view was favoured by Russell (1937: 9–15). For him, Leibniz's alleged reductions should lead to sets of propositions that are logically *equivalent* to the purportedly reduced ones. Typically, scholars arguing along Russell's lines – e.g. Broad (1975: 79), Rescher (1967: 71), Rescher (1981: 60–2) – think Leibniz's reductive analyses (or at least some of them) unsuccessful: the reductions fail in the case of asymmetrical relational sentences, for, at least in this case, a set of sentences cannot be attained where (i) there is no sentence containing a relational predicate and (ii) only truth-functional operators are involved. But both (i) and (ii), it is claimed, must be satisfied for the sentences in the set in question to be logically equivalent to the original ones. Thus, the asymmetrical sentence 'Paris loves Helen' is analysed into 'Paris loves, and for that very fact (*et eo ipso*), Helen is loved' (P 14), where the predicates 'loves' and 'loved' are (implicitly) relational and the non-truth-functional operator '*eo ipso*' is indispensable. For more on this, see Mates (1986: 215–8), Jauernig (2010: 189 ff.) and, especially, Mugnai (1992: 57–83). The most important and detailed interpretation of Leibniz's theory of the reducibility of relations is, in my opinion, Mugnai (1992).

¹³⁹ As observed by Plaisted (2002: 5).

understanding of (4) may be gained if we concentrate on these arguments. And this is what we are going to do.

Leibniz offers two arguments for (4). The second of them identifies conceptual completeness and the containment theory of truth underpinning it as the reasons for (4), and I shall propose that this argument is the one which best captures Leibniz's position. I shall also argue that, when viewed from this perspective, (4) turns out to be the strong claim that there are no extrinsic denominations *at all* – rather than no 'purely' extrinsic denominations – the meaning of which is that (prima facie) extrinsic denominations attributed to a substance fully reduce to, or supervene on, the intrinsic states of that substance *alone*.

3. *There are no (purely?) extrinsic denominations: the internalisation of universal interrelation*

3.1. *Extrinsic denominations*

As is the case with 'denomination', Leibniz's writings do not furnish us with a definition of 'extrinsic denomination'.¹⁴⁰ They do, however, offer us many examples, and they indicate that, as I have already observed in passing, an extrinsic denomination is a predicate concept which is imposed on something from another thing (*ex alio*) or, for that matter, makes a reference to another thing (*ad alium*).¹⁴¹ Thus, the denomination 'widower' predicated of someone who loses his wife is an extrinsic denomination because it makes a reference to the wife, and the wife and the widower are not of course the same thing (A VI, 4: 1503).¹⁴² Before being in a position to address Leibniz's arguments for (4), there are two more specific points about the notion of extrinsic denomination that need to be clarified.¹⁴³

The first concerns the 'other things' to which extrinsic denominations refer. Particularly, it should be made explicit that these 'other things' must be *wholly* distinct

¹⁴⁰ See Jauernig (2012: 176), Plaisted (2002: 3).

¹⁴¹ '*Ex alio*' is Leibniz's terminology in (3). '*Ad alium*' derives from Aristotle's characterisation of relations as beings '*pros ti*' (*Cat* VIII, a15–19). It is a recurrent formula in scholastic and early modern descriptions of relations and relational predicates. See e.g. Suárez, *Disp. Met.* LIV, ii, 9; Jungius, *Logica*, L. I, C. VIII, 4. The phrase 'make a reference' is also employed by Mates (1986: 218) and Plaisted (2002: 3).

¹⁴² For more examples, see A VI, 4: 308; A VI, 4: 944; A VI, 6: 400–1; LH IV, i, 9, Bl. 1–7 (in Jolley [1975: 186]); LH IV, iii, 5a–e, Bl. 15 (in Mugnai [2009: 64–6]).

¹⁴³ The ensuing remarks are not intended as a full account of extrinsic denomination. For more detailed attempts at defining this notion, see Jauernig (2010: 176–7) and Mates (1986: 218–21).

from the extrinsically denominated individuals. That is, the things to which extrinsic denominations refer must be distinct from the denominated individuals, all their properties and all their parts.¹⁴⁴ Think of the sentence ‘Socrates is wise’. The predicate concept ‘wise’ denominates Socrates. Now, Socrates and his wisdom are in some manner distinct from one another: the former is a Greek philosopher, the latter is not; Socrates talks, wisdom does not; and so on. But if this is the case, it would seem that the denomination wise attributed to Socrates makes a reference to another thing, namely wisdom. And this seems to indicate that wise is an extrinsic denomination of Socrates. But it is not. Put differently: without the qualification ‘wholly’, *all* denominations would trivially be rendered extrinsic on account of the difference between the subjects they describe and the properties they express.¹⁴⁵

The second point that needs to be clarified is more difficult to grasp, but I shall focus attention on what is relevant to the discussion of (4), leaving some additional difficulties aside. What I have in mind is apparent in one of the few accounts of the notion of extrinsic denomination that Leibniz offers by way of explicit characterisation. It occurs in a piece dated by the Academy editors to ca. 1679:

It seems, therefore, that extrinsic denominations, namely those which are born and die without *any change in the subject itself but only because of a change in something else* (*nulla subjecti ipsius mutatione, sed tantum, quia fit mutation in alio*), pertain properly to Relation. Thus, a father becomes a father when the son is born, even if he happens to be in India and so is not affected. In the same way, my similitude to someone else is born and

¹⁴⁴ See Jauernig (2010: 176–7). Bunnin and Yu (2004) disagree with this. Under the heading ‘Denominatio Extrinseca’ in their *Blackwell Dictionary of Western Philosophy*, they write: ‘A scholastic term used in contrast to denominatio intrinseca. Denominatio intrinseca (intrinsic denomination) means a reference to a thing’s intrinsic property or its inherent properties, while denominatio extrinseca (extrinsic denomination) is a reference to a thing’s accidental properties’. But this cannot be right. The denomination ‘white’ predicated of Socrates on account of his having the accidental property whiteness is no less intrinsic than any of those denominations predicated of him on account of his essential properties. See the examples of intrinsic denominations in the scholastic and early modern sources quoted in the next note, many of which are accidental properties – for instance, ‘doctus’ said of ‘Peter’, ‘albus’ said of a ‘wall’, etc.

¹⁴⁵ See Jauernig (2010: 177). Interestingly, some philosophers appear to have endorsed precisely this conclusion. Thus, in his philosophical dictionary, published twice during Leibniz’s lifetime (1692, 1713), Chauvin reports the view, put forward by the ‘most accurate philosophers’, that there are *no intrinsic denominations*, i.e., that all denominations are extrinsic. See *Lex.*, ‘Denominatio’, p. 171 (quote in Mates [1986: 219, n. 34]). Chauvin does not specify who these ‘most accurate philosophers’ are and, so far as I could see, none of the most important philosophical dictionaries in circulation in seventeenth-century Europe register the view that he reports. See e.g. Chasteigner, *Synopsis* (1612), p. 14; Hackspan, *Termini* (1664), p. 114; Le Roy, *Floretum* (1649), p. 61; Micraelius, *Lexicon* (1662), pp. 360–1; Scherzer, *Vade Mecum* (1675), Pars I, pp. 48–9. Cf., though, Volckmar, *Dict. Phil.* (1675), pp. 101–2, where ‘omnia verba’ are said to be extrinsic denominations. Cf. also Suarez, *Disp. Met.* LIV, ii, 6, who reports the view – advanced by Durandus and others – that all *entia rationis* are extrinsic denominations.

originates with *no* change occurring in me (*sine mutatione mei*), but *solely* because of a change in the other (*sola mutatione alterius*). (A VI, 4: 308; my emphasis)

The explanation of the origin of extrinsic denominations articulated in this passage does not represent any ‘attitude of belief’ on Leibniz’s part, as the subsequent lines indeed clarify.¹⁴⁶ But the passage is nevertheless interesting, because it brings out one characteristic of the notion of extrinsic denomination that I think orientates Leibniz’s reflections on this matter and that will later prove very important: extrinsic denominations *fully* supervene, or are fully dependent for their existence, on facts about the *other*, wholly distinct individuals to which they refer. Leibniz is particularly clear on this, insistently stressing the point through the employment of four key, unmissable words: ‘*nulla*’, ‘*tantum*’, ‘*sine*’ and ‘*sola*’. As he first puts it, extrinsic denominations ‘are born and die without *any* (*nulla*) change in the subject itself [i.e. the denominated subject] but *only* (*tantum*) because of a change in something else [i.e. the externally denominating individual]’. And, again, towards the end of the passage: extrinsic denominations ‘are born and originate with *no* (*sine*) change occurring in me [i.e. the denominated subject], but *solely* (*sola*) because of a change in the other [i.e. the externally denominating individual]’.

On the basis of these two points, we can formulate Leibniz’s conception of extrinsic denomination as follows:

- (8) For every denomination *D*, *D* is extrinsic if, and only if, there is an individual *a* such that, if *D* denominates *a*, then there is an individual *b* which is wholly distinct from *a* and *D* fully supervenes on facts about *b* alone.

A more stringent formulation of (8) should perhaps be phrased in terms of truth-entailment rather than in terms of supervenience, for the latter is an ontological relation, whereas denomination, as we have seen, is primarily a logical notion. Alternatively, I could keep ‘supervenience’ and replace ‘denomination’ with ‘property’. For the sake of simplicity,

¹⁴⁶ The passage continues: ‘It must be admitted, however, that, rigorously, there is no extrinsic denomination in reality, for nothing happens anywhere in the universe which does not affect every existent thing in the universe’. Note that here Leibniz says that there is *no* extrinsic denomination (*nullam esse denominationem extrinsecam*) – rather than no *purely* extrinsic denomination. We return to this in 3.3.

however, I shall leave (8) as it stands, which I think provides us with a sufficiently precise account to permit us to discuss (4) on a reasonably stable basis. Moreover, given (7), and assuming we are talking of extrinsic denominations which *truly* denominate the denominated individuals, whatever holds for a denomination will also hold for its correlative property. So there is nothing serious to worry about in the disanalogy I am pointing out.

Let us now move on to the more serious issue: why does Leibniz think that there are no denominations purely of the sort defined in (8)? As I anticipated, he gives two main arguments. We shall consider them in turn.

3.2. Leibniz's first argument: from the connection of things to (4)

Consider these texts:

A1: A consideration which is of the greatest importance in all philosophy, and in theology itself, is this: that there are no purely extrinsic denominations, because of the interconnection of things. (C 8/MP 133)

Philalethes. However, a change of relation can occur without there having been any change in the subject: Titius, 'whom I consider today as a father, ceases to be so tomorrow, only by the death of his son, without any alteration made in himself'.

Theophilus. That can very well be said if we are guided by the things of which we are aware; but in metaphysical strictness there is no wholly extrinsic denomination (*denominatio pure extrinseca*), because of the real connections amongst all things. (NE 227)

As elsewhere, in these passages Leibniz presents (4) as a consequence of the connection of things – that is, the doctrine we have already attained via premise (3) of the argument in *PL-M*.¹⁴⁷ A proposal as to how to understand this way of inferring (4) has been made by Rutherford (2005: 145), and I take his proposal to be a correct way of presenting Leibniz's position. It involves a two-stage reasoning.

Stage I: First, since everything in the universe is interconnected, whenever an object in the universe undergoes change, everything in the universe undergoes change. As Leibniz puts it in one text, 'nothing happens in one creature of which some exactly

¹⁴⁷ See also A VI, 4: 308 and A VI, 4: 944, where the same inference is found.

corresponding effect does not reach all others' (A VI, 4: 1618/MP 78; cf. A VI, 4: 308). For example, in a universe comprising two substances, *a* and *b*, if *a* takes on the property red, *b* will take on the extrinsic property of, say, 'being such-and-such when *a* takes on the property red'. *Stage 2*: The second stage of Leibniz's reasoning would be the decisive one, however. For, according to Leibniz, whenever an object undergoes extrinsic change, some change in the *intrinsic* states of that object must occur: 'no one becomes a widower in India by the death of his wife in Europe unless (*quin*) a real change occurs *in him*' (A VI, 4: 1503/L 365, my emphasis; cf. A VI, 4: 1646). Thus, when substance *b* takes on the extrinsic property of 'being such-and-such when *a* takes on the property red' there must be some variation in the internal states of *b*. And from this, it would seem, (4) follows. For, as we can see in (8), an extrinsic denomination fully supervenes on facts about the externally denominating thing. That is, in Leibniz's words, they are 'born and die without *any* change in the subject itself but *only* because of a change' in the external thing. But, pretty clearly, this is not the case in the situation just described, where we are told that an extrinsic change – such as becoming a widower – always entails *some* change in the intrinsic properties of the individual who undergoes that change. Hence, (4): there are no purely extrinsic denominations.

As appealing as it may seem, I believe this reasoning leaves open at least two important questions.¹⁴⁸

The first question concerns the relationship between the connection of things and (4). The texts quoted in **A1** make it very clear that the connection of things is supposed to be an *explanation* of (4): there are no purely extrinsic denominations *because* of the interconnection of things (C 8: '*ob rerum connexionem inter se*'; NE 227: '*à cause de la connexion...*'). But the reasoning just presented appears to give no hint as to how the explanation works. Granted, the connection of things does seem to explain the fact that whenever an object undergoes change, everything in the universe in which it exists undergoes change, that is, Stage 1. But how about Stage 2, which is the decisive step of the reasoning? Suppose *a* and *b* are green at *t*₁. Further, suppose that *a* takes on the intrinsic property red at *t*₂. The result is that *b* takes on a new extrinsic property at *t*₂: it passes from,

¹⁴⁸ As I said, Rutherford's explanation of Leibniz's position is, in my opinion, correct. Accordingly, the following misgivings are not about Rutherford's explanation of Leibniz's view but about Leibniz's view itself.

say, ‘being green when *a* is green’ at t_1 to ‘being green when *a* is red’ at t_2 . This is explained by the fact that *a* and *b* are connected. However, there seems to be nothing in this situation which implies that some variation in *b*’s *intrinsic* states has occurred: *b* continues to be green at t_2 . Of course, the extrinsic change of *b* does not preclude the possibility of a correlative variation in its intrinsic states. But it does not entail it either. So, more than the connection of things appears to be needed in order to obtain the decisive claim of Leibniz’s reasoning; there is something missing.

The second question I have in mind concerns that claim itself, regardless of whether it can or cannot be derived from the connection of things. The claim at stake, recall, is that, for every substance, if it undergoes change in its extrinsic properties, there must be some variation in its intrinsic properties. Now, the way in which Leibniz phrases the example of the widower in India leaves no doubt that he thinks that the extrinsic change of something depends, *to some extent*, on its intrinsic change: the man in India would not become a widower ‘unless’ (*quin*) a real change occurs in him. But this can *prima facie* be understood in two ways. One way is to think that intrinsic change is a necessary condition for extrinsic change. However, another way of reading it is to think that variation at the intrinsic level is not only a necessary condition for variation at the extrinsic level but also, and much more strongly, a sufficient condition for it. And note that the notion of extrinsic denomination in (8) can accommodate both readings. That is, assuming that, as I have proposed, (8) captures the notion of extrinsic denomination driving Leibniz’s reflections, his thesis about the status of extrinsic denominations can be interpreted as the assertion that extrinsic denominations supervene *partly* on facts about the denominated substance and *partly* on facts about the externally denominating substance or, alternatively, as the stronger assertion that extrinsic denominations supervene *completely* on facts about the denominated substance and hence not *at all* on facts about the externally denominating substance. Whatever the case may be, extrinsic denominations would be impossible, for, according to (8), extrinsic denominations fully supervene on facts about the externally denominating substance and both assertions contradict this.

One fairly predictable response to this could be that the weaker option must be Leibniz’s because, in formulating his thesis about extrinsic denominations, he often employs, as he actually does in (4), the modifier ‘purely’ (*pure*) or some other similar

adverb.¹⁴⁹ The suggestion here would be that extrinsic denominations *can* be upheld, though not on the version in (8). That is, extrinsic denominations do depend on the other, wholly distinct things to which they refer, but not fully or exclusively: they *also* depend on intrinsic features of the denominated substances.

The fact is, however, Leibniz does not always formulate his thesis in this qualified, soft version. For example, in the 1679 piece which I used as a basis for my formulation in (8), he simply writes that, ‘rigorously, there are *no* extrinsic denominations in things (*nullam esse denominationem extrinsecam in rebus*)’ (A VI, 4: 308; my emphasis). And this is not the only case in point. The same formulation occurs in *De modo distinguendi phenomena realia et imaginaries* (A VI, 4: 1503) and, even more emphatically stated, in a writing probably composed in the early months of 1702: ‘There is no extrinsic denomination *at all* in complete things (*denominatio prorsus extrinseca in rebus completis nulla est*)’.¹⁵⁰ Of course, this formulation does not logically imply that the intrinsic variation in an extrinsically denominated substance is a sufficient condition for its extrinsic change, not at any rate if Leibniz’s point is to deny the existence of extrinsic denominations as conceptualised in (8). And yet, the fact remains that Leibniz does formulate his position in the non-qualified version, and he does so more than once. If we are going to ascribe any meaning to this, it seems reasonable to believe that, in dropping out the qualifier ‘purely’, Leibniz’s point is this: would-be extrinsic denominations and changes supervene on facts about the denominated substances *only*. Which of these versions of the no-(purely?)-extrinsic-denomination thesis is to be preferred is an important question. If the stronger version turns out to be correct, then there will be no more to the extrinsic, grounded properties than facts about the intrinsic, grounding properties. And the (purportedly) decisive claim that there must be some variation in a thing’s intrinsic states whenever it undergoes extrinsic change leaves us with no criterion on which to base our decision.

3.3. Leibniz’s second argument: (4), predicate/foundation containment, and conceptual completeness

¹⁴⁹ A VI, 4: 1618: *absolute*; NE 227: *entièrement*.

¹⁵⁰ The text is edited, tentatively dated, and translated in Mugnai (2009), from which I quote.

Fortunately, however, the connection of things is not the only argument that Leibniz offers for (4). By way of preliminary, consider this text, taken from Leibniz's letter to Arnauld of 4/14 July 1686:

I hold that the concept of the individual substance contains all its events and all its denominations, even those that one commonly calls (*appelle vulgairement*) 'extrinsic' (that is to say, those that belong to it only by virtue (*en vertu*) of the general connection of things and of the fact that it expresses the entire universe after its own manner), since there must always be a foundation (*fondement*) for the connection of the terms of [true] propositions, and it must lie in their concepts. (A II, 2: 80/LA: 63–4)¹⁵¹

Two things in this passage call for attention. First, the explanatory role that it ascribes to the connection of things is considerably weaker than the one attributed to it by the argument in A1 as recast in the two-stage reasoning that we have been evaluating. As Leibniz parenthetically observes, the connection of things would explain substances' *possession* of commonly called extrinsic denominations or the *occurrence* of commonly called extrinsic events, *not* their dependence, partial or complete, on the intrinsic states of the denominated thing.¹⁵² That is, it would explain Stage 1 of our reasoning but not Stage 2. (Note that Leibniz's parenthetical observation also identifies substances' expression as the reason for their possessing commonly called extrinsic denominations and for the occurrence of commonly called extrinsic events: we come back to this in 3.4). At the same time, secondly, although the passage does not explicitly mention (4), it does say something that would explain it: given the nature of truth, that is, given that 'there must always be a foundation for the connection of the terms of [true] propositions, and it must lie in their concepts',

- (9) all of a substance's denominations, *including commonly called extrinsic ones*, must be contained in its concept.

There is much to be said about (9), and we shall revert to it shortly. For the time being, let us just leave it at that and see how it would perform its function in an argument for (4). In

¹⁵¹ Translation in LA altered: where Mason translates 'basis' I use 'foundation'. This is only to keep consistency with remarks I will be making soon.

¹⁵² See also A II, 2: 57.

PL-M, Leibniz presents his second argument with explicit mention of the relevant conclusion:

A2: It also follows that there are no purely extrinsic denominations which have absolutely no foundation (*fundamentum*) in the very thing denominated. For (*enim*) it is necessary that the notion of the subject denominated contain the notion of the predicate. (A VI, 4: 1645–6)¹⁵³

The argument is ostensibly simple. Its only explicit premise is that

(10) the notion of the predicate (of a true proposition) must be contained in the notion of the denominated subject,

from which (4) follows. If we take into consideration the relevant propositions presented so far, we can tentatively put the argument thus. According to (8), extrinsic denominations depend solely on facts about the externally denominating substances to which they refer. But, according to (10), true predicates or denominations are contained in the denominated subject. And this, as we know from (9), applies to any true predicate whatsoever, including commonly called extrinsic denominations. Hence, there are no denominations purely of the sort defined in (8). That is, (4).

Yet, in truth, the argument is not quite so simple. To understand it, it is crucial that we get (9) right and, more generally, the specific sense in which Leibniz allows – as he does in (9) – for predicate concepts of the extrinsic type to fall under the scope of the application of the containment theory of truth. Above all, note that (9) does *not* say that *extrinsic denominations* must be contained or included in the concepts of the substances to which they apply. What it says, rather, is that *commonly called (apelle vulgairement)* or, as we may say, *prima facie* extrinsic denominations must be contained or included in their concepts. The reason for this qualification must ultimately be traced, I think, to differences between the structure of relational sentences and that of sentences of the subject-predicate form (or, more precisely, of the subject + copula + non-relational predicate form), as well as to difficulties, which stem from these differences, with making the former correspond with ontic facts in the manner that the latter do. However, a satisfactory development of

¹⁵³ See also A VI, 4: 1503, where a parallel argument is given.

this reason would require us to enter into Leibniz's logico-grammatical reductions of relational sentences, which, as mentioned earlier, we shall not do. Instead, here I shall simply observe that the inclusion of literally extrinsic denominations in the concept of substances cannot be what Leibniz has in mind in (9) if it is true that the conception of extrinsic denomination that drives his investigation is the one captured by (8): for, given (8), if there is a denomination D such that it is included in a subject *a*, then D cannot be an extrinsic denomination. In any case, more important than Leibniz's reasons for excluding extrinsic denominations as such from the domain of application of the containment theory of truth is the question that this exclusion prompts: if not extrinsic denominations *qua talis*, quite what is included in substances' concepts when 'commonly called' extrinsic denominations are said to be included in them? My suggestion is that Leibniz's answer is this:

- (9*) For a commonly called or prima facie extrinsic denomination to be included or contained in the concept of its subject means that the *foundation* of that extrinsic denomination is included in that concept.¹⁵⁴

In 3.4, I will gesture at the way in which the nature of the 'foundation' invoked in this claim is to be fleshed out. In the remainder of 3.3, I will (A) present and comment on two texts which, jointly considered, lend fairly strong support to the interpretation of (9) in terms of (9*); (B) present Leibniz's argument for (4) in **A2** with the appropriate adjustments in place, i.e. with (9) read as (9*); (C) assess this argument in light of the two problems I have claimed to be involved in Leibniz's argument from the connection of things in **A1**; and, finally, (D) address one objection that might be levelled against the interpretation of (4) that will result from my assessment of Leibniz's argument in C.

A. (9) is (9*): two texts. In § 8 of *DM*, we read:

God, on the other hand, seeing the individual notion of Alexander, sees in it at the same time *the foundation of* and the reason for (*le fondement et la raison*) all the predicates (*tous*

¹⁵⁴ In suggesting this, I am lining up with Mugnai (2012) and Cover/O'Leary-Hawthorne (1999: 67–61). I am disagreeing, however, with other prominent scholars. See section 3.4.

les predicats) which can truly be stated of him – as, for example, that he vanquished Darius and Porus. (A VI, 4: 1540, 20–1541, 1; my emphasis)

This text occurs nine lines after Leibniz has formulated his containment theory of truth in its canonical, most recurrent terms: ‘the subject term must always include the predicate term (*le term...du predicat*)’ (A VI, 4: 1540, 11). Yet, for some reason, he now refrains from phrasing his point in exactly those terms: he says instead, or unambiguously implies, that Alexander’s individual notion includes the ‘*foundation of*’ his predicates, not the predicates themselves.¹⁵⁵ What is the reason? The only thing in this second formulation that is not found in the preceding, canonical one is the type of predicate concept that Leibniz singles out in order to exemplify his view: Alexander ‘vanquished Darius and Porus’ – that is, a predicate concept of the *extrinsic* type. So the suggestion here, I take it, is that, when applied to an extrinsic denomination, the containment theory of truth delivers not the containment of the extrinsic denomination as such in the concept of the subject, but rather of its foundation. That is, (9*).

One might object that in the quoted passage from *DM* § 8, and *pace* the example, foundation-inclusion is said to apply to *all* of Alexander’s predicates (*tous les predicats*) and not only to an especial class thereof, which would seem to indicate that foundation-inclusion is just a different way of formulating the account of truth as predicate-inclusion, bearing no philosophically relevant distinction. But now consider this second text, coming from Leibniz’s remarks on Arnauld’s letter of 13 May 1686:

For all the predicates of Adam depend (*dependent*) or do not depend upon other predicates of the same Adam. Setting aside, therefore, those which do depend upon others, one has only to consider together all the basic predicates (*predicats primitifs*) in order to form the complete concept of Adam sufficient to deduce (*deduire*) from it everything that is ever to happen to him. (A II, 2: 50/LA 47–8)

In quite plain language, here Leibniz says that *not all* the predicates of a substance – Adam – are required in order to produce its complete concept: only the basic, primitive ones are.

¹⁵⁵ To be precise, what Leibniz says, or unambiguously implies, is that Alexander’s individual notion includes the ‘foundation of *and* the reason for’ all his predicates. A very early text suggests a distinction between ‘foundation’ and ‘reason’. See *Specimen Quaestionum Philosophicarum ex Iure Collectarum* (A VI, 1: 95; 1664). As Mugnai (2012: 180) teaches, whether Leibniz continues to accept this distinction in his later writings is a moot point. I shall assume that he does not and confine my attention to the notion of ‘foundation’ only.

As for the rest, they ‘depend’ on the primitive predicates and hence, I believe it is safe to say, are *founded* on them. True, nothing in this passage suggests that there are true predicates which are not included in the complete concept of the substance to which they are attributed: all of them, *in some way*, are. But the passage does suggest that not all these predicates are included *in the same way*: dependent predicates must be extracted from primitive ones through suitable operations of ‘deduction’. Now, the passage does not inform us any further about the kinds of predicates falling within the dependent and primitive classes. However, if we assume that extrinsic denominations belong to the class of predicates which depend on primitive ones, then they will not be included (literally, as such) in the subject concepts to which they apply: their foundation will. And the assumption is reasonable enough: had Leibniz been pressed to provide examples of predicates belonging to the primitive class, he would surely not have listed extrinsic denominations. Given Leibniz’s conception, advanced elsewhere, of complex concepts as formed from primitive concepts, he would perhaps have listed some intrinsic denominations – namely complex intrinsic denominations – among the dependent class of predicates. But this would broaden the list of predicates eligible as members of the dependent class, rather than the primitive class so as to incorporate extrinsic denominations among its members. Indeed, as already observed, when Leibniz does provide an example of a predicate the ‘foundation’ of which is included in the subject concept, he mentions an extrinsic denomination, namely ‘vanquished Darius and Porus’. The same happens in *DM* § 13, where the extrinsic denominations ‘master of the republic’, ‘perpetual dictator (of the Romans)’, and ‘resolved to cross the Rubicon’ are all said to have a foundation/reason in the concept of Julius Caesar (A VI 4: 1548).¹⁵⁶

B. *Formulation of A2 with (9) interpreted as (9*)*. The interpretation of (9) in terms of (9*) being premised, we are now in a position to provide a more complete reconstruction of Leibniz’s argument for (4) in **A2**. We can put it as follows. According to (10), true predicates or denominations are contained in the denominated subject. This, as we know

¹⁵⁶ Well, more accurately, in *DM* § 13 the extrinsic denomination ‘destroyer of the liberty of the Romans’ is said to be included (*comprise*) in Julius Caesar’s notion (A VI, 4: 1547). But soon afterwards Leibniz says instead that it ‘has *its foundation* in [Julius Caesar’s] concept or nature’ (*a son fondement dans sa notion ou nature*)’ (A VI 4: 1548). In any case, it must be conceded that not all of Leibniz’s texts can be used to support the reading of (9) as (9*). For two problematic texts, see A VI, 4: 912 and A VI, 4: 1644.

from (9), holds for commonly called extrinsic denominations, the meaning of which is that, as (9*) asserts, extrinsic denominations have a foundation in the subjects to which they are attributed. Therefore, extrinsic denominations depend (at least partly) on these subjects. Now, according to (8), extrinsic denominations fully supervene on facts about the externally denominating individuals to which they refer. But this contradicts (9*). Hence, (4).

We shall note at this point that this reconstruction of Leibniz's argument for (4) displays a perfect inferential fit with Leibniz's actual language in **A2**. For, conspicuously, there Leibniz qualifies (4) with the relative clause 'which have absolutely no *foundation* (*fundamentum*) in the very thing denominated', which is exactly what one would expect if (9*) is operating as a premise in **A2**. Also, the fact that Leibniz combines (4) with this clause reinforces my claim that (9*) is the correct way of interpreting (9): when the containment theory of truth is applied to extrinsic denominations, the result is the inclusion not of extrinsic denominations as such in the denominated subjects but rather of their foundations.

C. Conceptual completeness and (4): (4) is the thesis that there are no extrinsic denominations at all. Hitherto I have argued that, when viewed from the angle of his containment theory of truth, Leibniz's thesis that there are no purely extrinsic denominations means that extrinsic denominations have a foundation in the intrinsic states of the denominated substances. Now we have to consider how, or whether, the identification of foundation-containment as the reason for (4) sheds some light on the two issues I have claimed Leibniz's first argument for (4) – the argument from the connection of things in **A1** – leaves open. More specifically, recollect, I claimed that argument to be defective in two senses. First, it falls short of providing us with an explanation of why extrinsic change requires a correlative change on the intrinsic level. Second, even if one were to concede that the argument does provide us with such an explanation, it fails to give us a clue as to which version of the no-(purely?)-extrinsic-denomination thesis – the weaker or the stronger one – is to be seen as Leibniz's. Does **A2** fare any better?

I would like to suggest that it does, and with respect to the two issues. However, consideration of the second issue will automatically give us a solution to the first one, so I shall confine my attention to the second issue only.

We may begin by observing that the conclusion in **A2** is formulated by Leibniz in the same terms as the one in **A1**: ‘there are no *purely* extrinsic denominations’. Because Leibniz employs the qualifier ‘purely’, we may be tempted to conclude that his rejection of extrinsic denominations must amount to the assertion that extrinsic denominations supervene *partly* on facts about the denominated substances and *partly* on facts about the extrinsically denominating substances – that is, the weak version of his thesis about extrinsic denominations. I believe, however, that Leibniz thought the qualifier to play no particularly relevant role here. Consider this version of the argument in **A2**, coming from *De modo distinguendi phenomena realia et imaginaries*:

[T]here are no (*nullae*) extrinsic denominations...for every predicate is contained in the nature of the subject. (A VI, 4: 1503)

Unlike the one in **A2**, the conclusion in this passage is unqualified. And the passage was probably written in 1683–1686, that is, roughly the same time period as the text from *PL-M* in **A2**.

If attention to the qualifier ‘purely’ is indecisive, we must look for an answer to our issue elsewhere. My suggestion is that the answer lies not too far afield, namely, I submit, in the premises from which (4) is reached, that is (9*) and (10). Let us first consider (10) in its own terms. More specifically, consider what Leibniz *does* with (10):

Since [the subject term must always contain the predicate term], we can say that the nature of an individual substance or of a complete being is to have a notion so complete that it is sufficient (*suffisante*) to contain and to allow us to deduce from it all the predicates of the subject to which this notion is attributed. (*DM*, § 8; A VI, 4: 1540/AG 41)

According to this text, the mark of conceptual completeness is that a substance’s concept is *sufficient* for deducing all its true predicates. If this is an implication of (10), then the meaning of (4), insofar as it relies on (10), must be this: so-called extrinsic denominations fully supervene on facts about the denominated substances *only*. Thus, where substance *a*

bears the (prima facie) extrinsic denominations D to substance *b*, a *complete* description of *aDb* can sufficiently be obtained by providing complete information about *a*'s intrinsic states. And about nothing else.¹⁵⁷

Enriched and reinforced, the same conclusion follows when we translate (10) into the appropriate foundation-language of (9*). For 'foundation' can have a very strong meaning for Leibniz. Writing about the relationship between monads and bodies, he says to De Volder:

[A]ccurately speaking, matter is not composed of constitutive unities, i.e., from real unities; rather it results (*resultat*) from them, since matter, i.e., extended mass, is nothing but a phenomenon *founded* (*fundatum*) in things. (GP II: 265/LV 303; emphasis mine)

Soon afterwards Leibniz famously contends:

[C]onsidering the matter carefully, it should be said that there is nothing in things except simple substances and in them perception and appetite. (GP II: 270/LV 307; emphasis mine)

The first text claims matter to be nothing but a 'result' having real unities as its 'foundation'. The second text claims these real unities and their properties to be *all* there is. Taken together, they imply that the reality of the result is *exhausted* by the reality of the foundation. So, for any substance *a* bearing a (prima facie) extrinsic denomination D to substance *b*, all there is to *b* supervenes on, or reduces to, the foundational, intrinsic states of *a* alone: there are no extrinsic denominations *at all*.

D. Extrinsic denomination and mind: an objection. But here is an objection. *Premise*: Leibniz insistently repeats that extrinsic denominations and relations require the activity of a perceiving mind; they are ideal or mental results. For instance, he writes to Des Bosses that the 'common relation' between David and Solomon 'is something merely mental (*mere mentalem*)' (GP II: 486).¹⁵⁸ *Conclusion*: it is false that extrinsic

¹⁵⁷ Or, to be exact, about no other *finite* being. See below.

¹⁵⁸ See also Gr. 266, GP II: 438, 517; GP V: 132, 210, 220, 246; GP VII: 241, 401; A VI, 6: 145, 227, 245.

denominations fully supervene on the states of the subjects that they denominate: a perceiving mind is also needed.

I concede the premise but not the conclusion. To see why, we must begin by agreeing on two points.

First, whatever one's take on Leibniz's reductionist stance on relations and extrinsic denominations may be, this much is certain: it applies at the level of *finite* substances only. Several important passages bear witness to this. For example, at the beginning of *DM* § 14, before presenting his view that finite substances are not externally related, the first thing that Leibniz deemed pertinent to clarify is this: '[F]irst of all, it is very evident that substances depend upon God, who preserves them and who even continuously produces them by a kind of continuous emanation' (A VI, 4: 1550/AG 46). The same proviso is made in the great majority of passages where Leibniz characterises substances as 'worlds apart'. We have already met one of them: 'Every substance is like a world-apart, independent of all other things, *except for God*' (A VI, 4: 1550/AG 47; my emphasis). And again, in *DM* § 33: '[E]verything that happens to [a substance] is a consequence of its idea or of its being, and nothing determines it, *except God alone*. It is God alone who determines creatures from the outside' (A VI, 4: 1581/AG 64; my emphasis).¹⁵⁹

The second point: God has a mind. In fact, God *is* a mind: 'God is a pure mind' (A VI, 4: 1399: *intelligentia pura*). Hence, he himself is a perceiver. Indeed, according to Leibniz, in God there is more perception than in anything else. For God is the only pure mind (A VI, 4: 1399: *solus...intellegentia pura*) and has 'infinite perception' (A VI, 4: 1542/AG 42: *perception...infinie*). As he puts it in a letter to Wolff, 'God, that is, the supreme mind, is endowed with perception, indeed to the greatest degree (*Deum esse perceptione et quidem maxima*)' (GLW 172/AG 234).

Now, if we take these two points together, we can readily see that the objection posed above is dispelled, even conceding its premise. For since (4) – whatever its meaning may be – holds true for finite substances only, it is perfectly consistent to say that (4) is the claim that extrinsic denominations completely supervene on intrinsic states of the denominated substances and that extrinsic denominations and relations require the activity of a perceiving mind: that mind could be the mind of God, whose relation to finite

¹⁵⁹ See also A VI, 4: 1620; GP I: 382, GP II: 57; GP IV: 484, 492, 496.

substances lies outside the domain of application of Leibniz's reductionism about relations and extrinsic denominations. And, in effect, this is precisely what Leibniz thinks:

The reality of relations is dependent on mind, as is that of truth; but they do not depend on the human mind, as there is a supreme intelligence which determines them from all time. (NE 265)

We shall return to this view in chapter 5, where it will take on an added importance in connection with my thesis that the unity between substances is the unity of a type of aggregate, the members of which are bound together by the representational activity of the divine mind.

3.4. Absolute, purely qualitative non-relational perception: the nature of intrinsic, foundational states

So far, I have argued that *prima facie* extrinsic denominations completely reduce to the intrinsic, founding states of the substances they denominate. But what are these states? This question opens up an area of inquiry which, in my own appreciation of the matter, transcends the limits of what I have referred to as the 'logical' side of pre-established harmony – i.e. considerations of truth and conceptual completeness. However, since the version of (4) I am attributing to Leibniz deploys the thorough dependence of extrinsic denominations on such states, it is clear that a satisfactory understanding of (4)'s meaning will largely hinge on what we make of them. Getting clearer on this will also pave the way for an enriched and less abstract account of the theory of universal relatedness that emerges from the strong construal of (4) that I have been defending. Moreover, the matter becomes all the more pressing since the line of argument I have developed in 3.3 can easily be thought, and has indeed been thought, to lead to conclusions that I believe to be mistaken. So, for a number of reasons, some remarks about the nature of substances' intrinsic foundational states are in order before we move on to the next chapter.

Let me pick up the thread of our topic in connection with the last reason I mentioned. As is well known, in some important mature texts Leibniz draws a distinction between 'external relations' – or relations *simpliciter* – and 'relational accidents'. The former are relations understood as polyadic properties which connect two or more entities

as a kind of ‘bridge’, that is, in Leibniz’s words, relations conceived of as ‘out of the subjects’ (GP VII, 401: *hors des sujets*) or as what is ‘common’ to two or more *relata* (GP II, 486: *relationem communem*).¹⁶⁰ On the other hand, relational accidents are monadic properties belonging to *one* entity only – for instance, the paternity ‘in David’ and the sonship ‘in Solomon’ (GP II: 486). While inhering in one entity, these accidents are nonetheless relational because their existence requires other entities. Thus, David is a father – there is paternity in David – ‘by virtue of’ (*quatenus, eo ipso*) Solomon’s being a son, and Solomon is a son – there is sonship in Solomon – by virtue of David’s being a father (GP II: 486).¹⁶¹

Now, some scholars, perhaps most notably Plaisted (2002), have read Leibniz’s argument in **A2** against the backdrop of this distinction. And, by doing so, they have claimed to find a key unlocking Leibniz’s position as to the nature of substances’ intrinsic foundational states. Briefly put, their reasoning is this: the import of Leibniz’s argument in **A2** is that every true predicate, including relations or extrinsic denominations, is *intrinsically* tied to, or included *in*, its subject. But if this is so, then Leibniz must have been committed to the existence of irreducibly fundamental relational accidents, even if he disavowed the irreducibility of external relations. For, as we have seen, relational accidents just are relations ‘in’ substances, and the inclusion of relations ‘in’ substances is part of the import of Leibniz’s argument in **A2**. Now, these relational accidents are the intrinsic foundational states from which extrinsic denominations result. As Plaisted puts it, ‘the intrinsic states upon which relations simpliciter are founded are actually relational accidents’ (2002: 69).¹⁶²

I believe none of this is entailed by (4)’s reliance on Leibniz’s containment theory of truth. First and foremost, allow me to repeat once again that the import of applying this theory to extrinsic denominations is not the inclusion of extrinsic denominations as such, but rather of their foundations. Now, I readily concede that this is indecisive as far as the

¹⁶⁰ I borrow the ‘bridge’ metaphor from Mugnai (2012: 181).

¹⁶¹ For more on this, see Mugnai (2012: 188), particularly his comments on GP II: 486.

¹⁶² See also Plaisted (2002: 10): ‘I believe that, for Leibniz, <paternity> and <sonship> [sc. in David and in Solomon, respectively] are the very properties of the related individuals that provide the foundation for the common relation in this case’ (quoted in Mugnai [2012: 181, n. 23]). That Leibniz accepts irreducibly fundamental relational accidents has been defended by many other scholars. For more references, see Mugnai (2012: 172, n 4). However, Plaisted is probably the one who has most forcefully emphasise the connection between this view and the fact that Leibniz derives (4) from his containment theory of truth.

nature of the foundation goes. It does block, or so it seems to me, a relational construal of substances' intrinsic foundational states on the ground that extrinsic denominations are internalised via the containment theory. Yet the question remains whether such a construal can perhaps be attained on different grounds. Can it?

There is no text known to me in which Leibniz explicitly denies that the foundation of a polyadic relation can be relational in nature. But he does explicitly assert that, whatever that foundation may ultimately be, it must be *absolute*. For instance, in the course of his comments on Temmik's *Philosophia vera theologiae et medicinae ministra*, he says that 'the foundation of a relation belonging to the predicaments is an absolute accident' (Mugnai 161).¹⁶³ Essentially the same point is made in a memorandum for a letter to Des Bosses of 12 December 1712, where we read that 'relations...result from something absolute (*ex absolutis*)' (GP II: 471). Leibniz's designation, encountered above, of basic, foundational predicates as '*primitive* predicates' leads to the same point: for, in Leibniz's terminology, something 'primitive' is something 'absolute'.¹⁶⁴ Now, we shall see in chapter 3 that the notion of absolute tracks two distinguishable ideas in Leibniz. Leaving that aside, however, I think this much is unarguable: when employed in the context of discussions about relations, the meaning of absolute is non-relational.¹⁶⁵ It follows from this that the foundations of extrinsic denominations cannot be relational accidents.¹⁶⁶ For such accidents require the existence of other things. Yet, understood as non-relational, something absolute is 'thought with *no other thing* being thought' (A VI, 2: 489; my emphasis).¹⁶⁷

¹⁶³ Translation in Mugnai (2012: 181). The same point is implied in *De abstracto et concreto*: 'Every abstract term is either the foundation of a relation or the relation itself; that is (*seu*), it is absolute or respective' (A VI, 4: 993). Leibniz's reflections on Temmik's book, along with his marginal notes to its first part, are published in Mugnai 154–64.

¹⁶⁴ See e.g. A VI, 4: 508, where 'primitive notions' are said to be 'absolute notions'.

¹⁶⁵ In support of this, see e.g. A VI, 4: 993; A VI, 4: 1085; NE 228. 'Absolute' and its cognates are also employed by Leibniz in the sense of 'positive' or 'affirmative' (GP VI: 112, 383; A VI, 3: 519). When this is the case, they oppose the triad limitation/negation/privation (A VI 4: 36; 538, 2037; A I, 15: 560). We will discuss this family of notions in chapter 3.

¹⁶⁶ This is not to suggest that 'paternity in David' and 'sonship in Solomon' are not the foundation of the common, polyadic relation holding between them. What I will be suggesting, rather, is that there is a way of reading 'paternity in David' and 'sonship in Solomon' that does not force us to take them as fundamentally relational in kind.

¹⁶⁷ Strictly speaking, this conception of absolute only applies to God's simple unanalysable attributes (A VI, 4: 508). However, it seems clear that, when predicated of the accidents of finite substances, Leibniz's point is that an accident is absolute if the existence of no other *finite* external entity is required for its explanation.

If the foundations of extrinsic denominations are absolute and absolute means non-relational, then these foundations must be qualities. In a text probably composed in the mid-1690s, we read:

[R]elations [such as position and place] demand a foundation taken from the category of quality (*fundamento sumpto ex praedicamento qualitatis*), that is (*seu*), from an intrinsic accidental denomination. (C 9/MP 134)

But what *type* of quality does Leibniz have in mind? The answer is given in a passage that I have already quoted. The denominations ‘that one commonly calls extrinsic’, we found Leibniz saying in a memorandum for a letter to Arnould,

belong to the individual substance by virtue of (*en vertu*)...the fact that it *expresses* (*exprime*) the entire universe after its own manner. (A II, 2: 80/LA: 63–4; my emphasis)

If *prima facie* extrinsic denominations belong to substances by virtue of their *perceiving* (or expressing in a unity) other things, then the foundations of extrinsic denomination must be substances’ perceptions.¹⁶⁸ I have already said something about Leibnizian perception in chapter 1, and we shall delve further into this notion in the next chapter. Here I must face the obvious problem it raises: if the foundations of extrinsic denominations are absolute, non-relational qualities, can perceptions really be the foundations we are looking for? To wit, can perception be an absolute, purely qualitative non-relational property?

In a set of annotated transcriptions of Jungius’ *Logica*, Leibniz makes a comment which establishes the framework for an affirmative answer to this question.¹⁶⁹ In a chapter entitled ‘De Notionum Differentiis’, Jungius says that absolute notions are the opposite of relational notions.¹⁷⁰ More specifically, absolute notions so conceived are ‘unqualifiedly absolute’ notions (*omnino absoluta*), for they ‘include no relation at all (*nullum prorsus respectum includit*)’ (A VI, 4: 1086). Shortly afterwards, however, Jungius points out that there are some notions which, while including ‘a certain relation’, can nonetheless be

¹⁶⁸ My reasons for equating ‘expression’ and ‘perception’ in this and similar contexts are given in chapter 1, section 3.4: when predicated of substances, expressions are perceptions because the expressions occur in a unity.

¹⁶⁹ Attention to this passage has been drawn by Mugnai (1992: 124), whom I follow in this paragraph.

¹⁷⁰ See *Logica*, Logical Generalis, L. I, C. XV.

considered ‘absolute in a qualified sense’ (*absoluta secundum quid*).¹⁷¹ Among others, this is the case of reflexive notions – for example, ‘being similar to itself’ (*sibi simile*). Leibniz makes the following comment: such a notion is ‘absolute...because it involves a respect, that is, it contains that which belongs to the terminus (*quod ad terminationem requiritur*)’ (A VI, 4: 1087; my emphasis). In other words, as Mugnai teaches, absolute *secundum quid* notions can at the same time be absolute *and* involve a certain relation precisely because they are reflexive: the term of reference or terminus of the relation is included *within* them (1992: 124).

It is hard not to be inclined to see this particular kind of absolute notion as providing Leibniz with just the appropriate sort of theoretical tool that would allow him to conceptualise the nature of the states of his isolated yet all-perceiving substances. But let us firm inclinations up a bit by concentrating on some relevant texts. Compare Leibniz’s claim that

- (11) every substance has ‘perceptions or expressions of external things’ (GP IV: 484/WF 18)

with his claim, to Des Bosses, that

- (12) every substance ‘always expresses within itself its relations to all others things’. (GP II: 457)

(11) and (12) differ from one another with respect to the items they single out as the intentional objects of substances’ perceptions. According to (11), substances perceive external things (*choses externes*). According to (12), they perceive their *relations* to external things (*suas ad caetera omnia relationes*). And this occurs ‘within’ substances (*intra se*). A fully fledged account of Leibniz’s theory of perception should explain how (11) and (12) can be rendered consistent, a task which I shall not undertake here. In any case, the reason I point to these different formulations is not that I think they pose any

¹⁷¹ The adjective ‘certain’ in the characterisation of absolute *secundum quid* notions is neither Jungius’ nor Leibniz’s, but I think its employment is justified by Jungius’ and Leibniz’s use of ‘prorsus’ for describing *omnino absoluta* notions.

serious difficulty to Leibniz. Rather, the reason is that (12) signals the path towards a non-relational construal of substances' representational states. How so?

(12) claims substances' relations to other things to be the intentional objects of their perceptions. Now, this means that those perceptions will bear *relational content*: the represented contents are relations. This warrants the possibility for there to be relational truths about substances. Also, it warrants the possibility for such truths to have a foundation in, or correspond with, ontic facts about those substances. However, there is nothing here which forces us to regard these facts as fundamentally relational and non-absolute in nature: what is relational is not the representational state but the *content* it bears. Rutherford puts it well: 'intramonadic relations [i.e. relations within substances] are monadic accidents that have a relational content. They do not entail the existence of irreducibly fundamental relational facts about substances' (1995: 161, n. 75).¹⁷² Thus, even if substances are not externally related and their states are therefore absolute, they can still make a certain reference to their environment insofar as they 'representationally' – or 'objectively', to use Cartesian terminology – contain information about it. As in the case of absolute *secundum quid* properties, however, the 'external' objects or termini of substances' perceptions are *within* the perceiving substances: they are part of the content of their perceptions.

In connection with this, it is interesting to consider §§ 13–14 of *Mon.*, the sections of that work in which Leibniz begins to articulate his view of the properties of monads. In § 13, Leibniz explains that the 'diversity within substances...involves a multiplicity in a unity' and that, therefore, 'there must be a plurality of properties and relations (*affections et rapports*) in the simple substance' (GP VI: 608/AG 214). Note Leibniz's careful phrasing. The relational element is located *alongside* substances' properties rather than predicated *of* their properties: there are properties *and* relations within substances – rather than relational properties. And what we find immediately after, in *Mon.* § 14, is that the properties in question are, well, perceptions. So, perceptions are not relational properties. Rather, there are perceptions *and* relations, that is, perceptions and the relations expressed in the perceptions.¹⁷³

¹⁷² See also Mugnai (1992: 124–5).

¹⁷³ The word for 'property' in § 14 is 'state' (*état*), rather than '*affectio*'. I am assuming the equation property/accident=modification=state. In favour of this, see Leibniz's letter to Des Bosses of 20 September 1712: '...it is asked whether there are not some accidents that are more than modifications. Yet these seem to

But there are lengthier and more systemic grounds for a non-relational construal of perception, too:

Every substance is like a world-apart, independent of all other things, except for God; thus all our phenomena, that is, all the things that can ever happen to us are only consequence of our being...In fact, nothing can happen to us excepts thoughts and perceptions, and all our future thoughts and perceptions are merely consequences, though contingent, of our preceding thoughts and perceptions...This would never fail, and would happen to me regardless, even if everything outside me were destroyed, provided there remained only God and me (*DM*, § 14; A VI, 4: 1550–1/AG 47; my emphasis).

Two main claims are made in the passage:

- (13) Every finite substance is independent of all other finite substances in such a way that, should God decide to annihilate a substance's universe, nothing would change for it.
- (14) In substances there are only perceptions (or, only perceptions 'happen' to substances).¹⁷⁴

I see no way in which Leibniz could have consistently upheld (13) – the world-apart doctrine – and (14) had he regarded substances' perceptions as relational accidents. For, if the perceptions predicated in (14) are such accidents, then other things would be required for substances to bear those perceptions, in which case (13) cannot stand up. Indeed, Hidé Ishiguro thinks Leibniz falls in a 'strange inconsistency' in upholding (13) and (14), for, 'if substances are individuated by their perceptual states..., it is a logical truth that there is more than one substance in the world' (1972: 114).¹⁷⁵ More recently, Stephen Puryear has attempted to save Leibniz from the charge of inconsistency, but at the price of underplaying the importance of formulations of the world-apart view such as the one in *DM* § 14, which

be clearly superfluous'. And, later on, we find: 'modification or state (*modum seu statum*)' (GP II: 458/LR 270). See also GP VI, 351–2. For discussion, see Mugnai (2005).

¹⁷⁴ Perceptions *and* thought, one might observe. However, the first sentence of the quoted passage makes it clear that (14) applies to 'every substance' – not only to 'us'. If this is so, then I think 'thought' must be interpreted more broadly as perception.

¹⁷⁵ I owe this quotation to Cover/O'Leary-Hawthorne (1999: 76).

he deems are ‘far outnumbered by...statements in which Leibniz introduces some kind of qualification’ (2010: 788). Neither of these contentions is compelling, in my opinion. As for the latter, there are myriads of passages in which Leibniz advances the view that substances are like worlds apart, depending on anything except for God.¹⁷⁶ With regard to Ishiguro’s view, I readily concede that if (13) holds true, then specifying completely the information represented in the perceptual states of a substance will bring with it the specification of complete information about the entire universe at which that substance exists. But all that this requires is that the relatedness of that substance to its universe be represented in such states, not that the states themselves be relational. Thus, as Rutherford (1995: 184–5) explains, that David is the ‘father of Solomon’ means that David expresses *himself* as standing in a relation of paternity to someone with all the properties truly ascribable to Solomon. Yet this entails no commitment to the actual existence of Solomon: Solomon is metaphysically – that is, logically – dispensable. Of course, Leibniz’s view that perfection and harmony are maximised in the actual world demands the existence of more than one substance and, actually, of infinitely many substances. But this is a contingent or hypothetically necessary fact, not an absolute or metaphysically necessary one: it presupposes God’s perfect will.¹⁷⁷ Metaphysically speaking, all there is to David with respect to Solomon is a correspondence – a pre-established harmony – between his representational states and those of Solomon secured by God’s free creative decree:¹⁷⁸

All our phenomena...are only consequence of our being. And since these phenomena maintain a certain order in conformity with our nature or, so to speak, with the world which is within us...this would be sufficient to enable us to say that these phenomena are true without bothering with whether they are outside us. Nevertheless, it is very true that the perceptions or expressions of all substances mutually correspond. And God alone...is the cause of this correspondence. (*DM* § 14; *A* VI, 4: 1550–1/*AG* 47)

¹⁷⁶ See e.g. *A* VI, 4: 1550; *A* VI, 4: 581; *A* VI, 4: 1620; *GP* I: 382, *GP* II: 57; *GP* IV: 484, 492, 496, 517; *GP* VII: 312. To these texts we can add passages in which Leibniz says that nothing happens to substances which do not follow from what is already internal to them. See e.g. *A* VI, 4: 1550–1, *GP* IV: 46–7, 57, 557, 439, 440. It should go without saying that my remarks about Puryear are not intended as a refutation of his contribution as a whole, which in any case is very interesting and well argued.

¹⁷⁷ See Leibniz’s April 29 letter to Des Bosses (*GP* II: 496) and his reply to Bayle’s objections to *NS* (*GP* IV: 517).

¹⁷⁸ Cover/O’Leary-Hawthorne put the point nicely: ‘Perceptual states are monadic...they count as *expressions of* a thing outside... only insofar as pre-established harmony guarantees merely that they correspond in suitable ways with monadic states of other substances. Pre-established harmony is not properly understood in terms of relational accidents in substances, but rather as a general truth (a very long conjunction, perhaps) decreed by God in his creation of the best world’ (1999: 74).

The thought that such a correspondence might be too weak a device to yield a unified world is sure to come to mind. But this is something we will have to discuss later.¹⁷⁹

Conclusion

My aim in this chapter has been to offer an account of Leibniz's reasons for the two components of pre-established harmony that every substance relates to every other substance in its universe, and that no substance externally depend on any other substance in its universe – that is, (C1) and (C4) in the formulation of pre-established harmony set out in chapter 1. Taking a passage from *PL-M* as my starting point, I have argued that (C1) derives from the idea that it is possible to construct true relational propositions whose variables can be saturated by any substance in the universe, in conjunction with the idea that true propositions about substances must correspond with ontic facts about those substances. On the other hand, (C4) follows from Leibniz's no-extrinsic-denominations thesis, which in turn derives from his complete-concept theory of substance and the predicate-containment theory of truth underpinning it. Lining up with some commentators and disagreeing with others, I have argued that the upshot of such a derivation is not the inclusion of extrinsic denominations, as such, in substances, but rather of their foundations. I have construed these foundations as absolute, non-relational perceptual states which exhaust the reality of the founded, extrinsic denominations: all there is to (prima facie) extrinsic denominations reduces to the purely qualitative representational states of the denominated substances, and hence there are no extrinsic denominations at all. More generally, if my arguments in this chapter are on the right track, we can conclude that, as far as (C1) and (C4) go, a satisfactory explanation of Leibniz's motivations for pre-established harmony can be obtained by concentrating on some of his most distinctive logical doctrines.

The theory of universal relatedness that emerges from the theses I have defended is quite idiosyncratic and represents, in my opinion, one of the most fascinating aspects of

¹⁷⁹ Particularly, in chapter 5.

Leibniz's conception of the universe.¹⁸⁰ Given both substances' universal interrelation and Leibniz's strong reductionism about extrinsic denominations, the information encoded in the states of each member of the universe *reduplicates* the information about the entire universe. As Leibniz writes in his *Communicata ex disputationibus cum Fardella*,

each thing is connected to the whole universe in such a way...that in any given thing, indeed in each and every mode of any given thing, God clearly sees the universe as implied (*implicatum*) and inscribed (*inscriptum*). (A VI, 4:1668)¹⁸¹

In Antognazza's words, in the ontological constitution of finite things 'there is inscribed a structural *esse ad aliud* so that, if one thing is given, also this *aliud* is given' (2009b: 82). And since this internalised 'structural reference to other' extends throughout the universe, the result is a world in which everything is, in a sense, *in* everything: '[T]he universe is, in a sense (*in quelque façon*), multiplied as many times as there are substances' (A VI, 4: 1542/AG 42). The adverbial locution in this sentence is important. In what sense is the universe multiplied? As should be clear from the discussion in 3.4, Leibniz's answer to this question is 'perceptually'. Thus, we can say that, minimally, the world is, for Leibniz, unified inasmuch as it is perceptually reduplicated in each of its world-apart, radically independent members. We shall return to this view in chapter 5, where I shall argue that it is in *prima facie* conflict with a more demanding conception of the requirements for the unity of the world set out in other writings. But we will come that in due course. Now it is time for us to delve deeper into the key notion at the basis of the Leibnizian view we have reached: perception.

¹⁸⁰ Idiosyncratic though it is, Leibniz's understating of substances' interrelation was importantly influenced by the philosophy of Bisterfeld, and more particularly by his account of intersubstantial relations as *immediatio* or 'co-implication'. See Mugnai (1973), Rutherford (1995: 36–40), Antognazza (1999) and Antognazza (2009b).

¹⁸¹ See also GP VI: 329/H 341: 'I have conclusively proved that God sees in each portion of the universe the whole universe'. Cf. GP II: 226, GP III: 623, GP VI: 616; A VI, 4: 553; A VI, 4: 1542; A VI, 4: 1616.

CHAPTER 3

Perception and Pluralism: Leibniz's Theological Derivation of Perception in connection with Platonism, Rationalism and Substance Monism

1. Introduction: Leibniz's theological derivation of perception as a property of every substance

At the heart of Leibniz's metaphysics is the claim that all substances are endowed with representational power or perception. Several passages, early and late, testify to the importance of this view. Maybe the most famous of all is Leibniz's statement of idealism in his letter to De Volder of 30 June 1704: 'there is nothing in things except simple substances and in them perception and appetite' (GP II: 270/LV 307). But the ascription of perception to substances is also apparent in contexts where Leibniz's commitment to idealism is more controversial. For example, in a paper composed in the late 1680s we find Leibniz saying that perception belongs 'to all forms' (A VI, 4: 1625/MP 85). Earlier than this, a similar passage occurs in Leibniz's 1676 *De Formis Simplicibus*: 'perception [is] everywhere', he writes therein (A VI, 3: 522–3/DSR 83).¹⁸² Finally, we shall recall that, as argued in chapter 1, perception is integral to universal expression – the doctrine of universal expression *is* the doctrine of universal perception – and to pre-established harmony – the notion of harmony is definitionally entailed by that of perception.¹⁸³ Both doctrines were clearly in place by the mid-1680s and were meant to hold for every substance.

But what is the ground of perception? Why is it that Leibniz came to regard perception as a fundamental property of every substance?

At the beginning of chapter 2, we saw that some important writings from the 1680s indicate that Leibniz regarded pre-established harmony as a logical consequence of the complete-concept theory of substance, the doctrine of universal expression playing the role of an intermediary premise: from conceptual completeness to universal expression and then to pre-established harmony.¹⁸⁴ This suggests a straightforward answer to the question I have just posed. Since universal expression involves perception and conceptual

¹⁸² For another early passage pointing in a similar direction, see A VI, 4: 1400/RA 247 (ca. 1678–1679): 'Every form is in a way a soul, i.e. capable of sensation and appetite'.

¹⁸³ See section 3.4 of that chapter.

¹⁸⁴ See pp. 58–9 (Scheme 1).

completeness entails universal expression, perception follows from conceptual completeness. Further, since every substance has a complete concept, every substance is endowed with perception. The logicist reading looms large once again.

The view I shall put forward in this chapter breaks with this answer. I shall not directly argue that the property of conceptual completeness cannot deliver the property of perception. *Prima facie* motivation for this negative claim can be found in the fact that, considered as such, the idea of completeness – whether predicated of substances or of their concepts – refers to a quantitative determination: *all* the properties (true predicates) of a substance are included in that substance (its concept). But the notion of perception brings with it a specification of the *nature* or ontological *character* of the properties that the complete-concept theory claims to be universally quantified.¹⁸⁵ Be this as it may, what I wish to do in this chapter is to introduce and discuss a positive alternative to the logicist construal of Leibniz’s derivation of perception by placing the roots of perception at a different and more fundamental explanatory level. In particular, my suggestion is that the key unlocking Leibniz’s view that perception is a property of every substance should ultimately be located in the domain of his philosophical theology, and more specifically in his Platonic understanding of the relation between God and creatures. Indeed, Leibniz hints as much in well-known passages. At the end of *DM* § 9, we read:

It can even be said that every substance bears in some way the character of [God]...and imitates him as much as it is capable. For it expresses, however confusedly, everything that happens in the universe, whether past, present, or future – this has some resemblance to an infinite perception or infinite knowledge. (A VI, 4: 1542/AG 42)

The doctrine Leibniz presents in the second sentence of this passage is the doctrine of universal expression: every substance perceives the entire universe. Conspicuously, however, in its first sentence Leibniz contends that this reflects the fact that substances ‘imitate’ God (*l’imite*) and ‘have in some way his character (*caractere*)’. More specifically, substances’ property of universal perception ‘has some resemblance to an infinite perception or infinite knowledge (*perception ou connoissance infinie*)’. Now, since infinite

¹⁸⁵ In keeping with this, in *Mon.* § 60 Leibniz says that substances are ‘representative in nature’ (*dont la nature étant representative*)’ (GP VI: 617). See also A II, 2: 243/LA 146: ‘...a substance, whose nature (*estre*) it is to be representative’.

perception is only ascribable to God, I think it is plausible to read this passage as embedding the following inference: substances – all of them – are endowed with perception *because* they imitate God, in whom there is infinite perception. I shall refer to this account as the ‘theological derivation of perception’.

Unlike the explanation from conceptual completeness, the theological derivation of perception does provide us with a fairly clear and direct insight into why Leibniz regards substances’ properties as representational in nature or character.¹⁸⁶ Moreover, it has the additional virtue of being more permanent than the complete-concept theory. For, as prominent as that theory may have been during the 1680s, it virtually disappears from Leibniz’s post-1680s writings.¹⁸⁷ And traces of conceptual completeness can scarcely be found in writings prior to the 1680s.¹⁸⁸ By contrast, the theological derivation of perception features clearly in writings that span almost forty years of Leibniz’s career. Thus, as late as 1714, in *Mon.* § 48, Leibniz says that substances possess ‘perceptive power’ (*faculté perceptive*) by virtue of their imperfect imitation of God’s attribute of ‘knowledge’ (*connaissance*) (GP VI: 615). And as early as 1676, we read:

God is the primary intelligence, in so far as he is omniscient, or, insofar as he contains the absolute affirmative form which is ascribed in a limited way to other things which are said to perceive (*percipere*) something. (A VI, 3: 520/DSR 79)

Similarly, in the *Conspectus libelli elementorum physicae* (ca. 1678–9), Leibniz wrote:

That it is the nature of a soul or form to have some perception (*perceptionem*)...and why; namely, because souls result from God thinking of things, that is, they are imitations (*imitationes*) of his ideas. (A VI, 4: 1988–9/RA 235)

¹⁸⁶ This theological model of property derivation can serve as a basis for explaining other kinds of properties of substances too, perhaps most notably appetitions. But my focus will be on perception.

¹⁸⁷ *Virtually* – which is not to say completely. See the references given in n. 49.

¹⁸⁸ This is not to say that there are *no* traces of conceptual completeness prior to 1680. See Garber (2009: 187–8) for some earlier texts. However, as Garber himself points out, it was only in the 1680s – and indeed in the mid-1680s – that Leibniz appears to have become aware of the philosophical significance of the idea that substances have concepts which contain all of their properties (2009: 188).

Two sentences later, Leibniz adds that ‘it is foolish to want to attribute perception to man alone’ (A VI, 4: 1989/RA 235).¹⁸⁹

In the remainder of this chapter I shall elaborate on Leibniz’s theological derivation of perception in connection with the problem of substance monism, rationalism, and a family of doctrines that he inherited from the Platonic tradition.¹⁹⁰ In doing so, my overarching goal is twofold. First, I aim to achieve an explanation of the provenance of the two claims, integral to pre-established harmony, that all substances are endowed with representational power – (C6) in our formulation of pre-established harmony in chapter 1 – and that there is a plurality of substances in the universe – (C7). This explanation will bring into clear relief a theological strand of pre-established harmony which is distinct from, and at least as important as, the logical strand pursued in the previous chapter. The second aim of the chapter is to show that, however unrelated they may seem at first, (C6) and (C7) – perception and pluralism – are actually two sides of the same metaphysical coin: what is at the foundations of Leibniz’s philosophy that prohibits a Spinozistic one-substance metaphysics is precisely his construal of substances’ powers as representational powers. If I succeed in showing this, we will have good reason to believe that the common appraisal, encountered above, that Leibniz’s pre-established harmony is ‘the closest parent’ of Spinoza’s monism is in the end no cause for alarm: perception is a key component of pre-

¹⁸⁹ The point about permanence and stability also applies, or so I would argue, to another important explanation Leibniz offers for the view that all substances are endowed with perception, namely introspection or reflection on the self. For, important though it is, this ‘psychological’ explanation becomes clearly visible rather late in Leibniz’s career, namely from the second-half of the 1690s onwards. See NE 51–2 and especially *IN* § 10 (GP IV: 510), where the ascription of perception to all substances is derived from introspection plus a version of the principle of continuity (everything in the universe is alike or of the same kind). See also GP VI: 502 (1702), GP II: 251 (1703). An earlier text in support of the ‘introspection view’ could be a letter to Foucher, written ca. 1686–1687 (GP I: 390). At any rate, textual support for the view I shall advance comes not only from writings from the 1680s and later but also from writings from the 1670s. This being the case, I think it is more permanent and stable than the introspection view.

¹⁹⁰ The importance of Platonism to Leibniz is repeatedly recognised by Leibniz himself. See e.g. A II, 1: 467; GP III: 568, 606; GP VII: 148. It has been acknowledged by several Leibniz scholars as well. See Schrecker (1951), Rutherford (1995), Fouke (1994), Mercer (1999, 2000, 2001, 2007), Adams (2007), and Antognazza (2007b, 2015a, 2015c), to mention only some of them. Throughout this chapter I shall sidestep the historical question of which (group of) Platonic thinker(s) most influenced Leibniz, a topic which is debated in the literature. For a summary of the main positions, see Mercer (2001: 174–5). In connection with this question, it is worth recalling that Leibniz carefully summarised and commented on Plato’s *Phaedo*, *Theaetetus*, and *Parmenides* in 1676. See A VI, 3: 284–97, 298–311 and Antognazza (2009a: 170). Also, there is evidence that he read the *Timaeus*. See A VI, 1: 510 and Schrecker (1951). This suggests that Plato himself may have been one of Leibniz’s major Platonic influences.

established harmony and the very theoretical foundation on which ontological pluralism rests.¹⁹¹

The divisions of the chapter are as follows. In sections 2 and 3, I shall begin by concentrating on the general model of property derivation which sets the framework for Leibniz's extraction of the particular property of perception from God's 'infinite perception'. As we shall see, this model goes beyond the imitation relation, including also the emanative relation (section 2), as well as Leibniz's Platonic understating of the absolute as logically or definitionally prior to the limited (section 3). In section 4, I shall argue that Leibniz's endorsement of this model threatens to undermine his pluralistic view of reality. I shall explain this threat – the monistic threat – as arising from Leibniz's triple commitment to emanation (understood in a certain sense), the logical priority of the absolute, and rationalism. In this section, I will also try to show that, so explained, the monistic threat was actually more than a mere threat: Leibniz succumbed to it and embraced monism during the last years of his Parisian stay (1675–1676).¹⁹² This will return us full-circle to perception, our topic in section 5. As I anticipated, my suggestion in this last section will be that it was precisely the notion of perception that allowed Leibniz to clamber out of the monistic trap. Particularly, I shall propose that what made room for ontological pluralism within Leibniz's rationalist and Platonic outlook was the view that perception is a property of every substance, and more particularly that perception is the property which constitutes the very being of the substances that God emanates. Further, I shall show that, unlike other *prima facie* available alternatives, this solution of the monistic problem via perception has the virtue of blocking monism while accommodating both Leibniz's rationalism and his Platonic conception of the absolute as logically prior to the limited.

¹⁹¹ See chapter 1, section 4, for the alleged connection between pre-established harmony and monism.

¹⁹² I am not the first to argue for this. See e.g. Stein (1890), Adams (1994: 123–30), Kulstad (1994, 1999, 2005), Wilson (1999: 227–8), Brown (1999: 265), Blank (2001) and Laerke (2018), all of whom think that Leibniz was committed to, or at least leaned towards, substance monism in 1675–1676. But there are exceptions. See Friedmann (1946), Parkinson (1978), Mercer (1999, 2000, 2001: 386–7, 430, 453–5, 459). I shall have more to say about Mercer's views in section 4.

2. *Leibniz's general model of creaturely property derivation:
from imitation to emanation and the Being-Commonality Thesis*

Leibniz's theological derivation of perception is part of a wider explanatory model, one whose scope is meant to reach beyond perception. This is borne out by a number of texts in which substances' ontological complexion *in general* is explained in terms of its correspondence to divine attributes.¹⁹³ In articulating why this correspondence obtains, Leibniz's model reaches not only beyond perception but also beyond imitation: substances resemble God and also 'emanate' or 'outflow' from him.¹⁹⁴

Imitation and emanation are not conflicting notions. Although the latter need not be seen as a necessary condition of the former, both play an important part in accounts of divine causation in the Platonic tradition. According to Proclus and Plotinus, for example, things imitate the One as a *result* of their ultimate procession from him.¹⁹⁵ A similar view appears to be advanced by Leibniz in *DM* § 28, where he claims 'the essence of our soul' to be a 'certain imitation or image' of the divine essence 'by virtue of (*en vertu*) God's continual action on us' (A VI, 4: 1573; my emphasis). In general, however, it is clear that emanative causation singles out features of the God/creatures relation that imitation fails to capture. Two of them are relevant to the discussion that follows. For one thing, emanation captures the continuity of the productive act. Call this thesis the 'Continuity Thesis'. We

¹⁹³ See e.g. *Mon.* § 48, where God's power, knowledge, and will are said to correspond to what, in created substances, are 'the subject or basis', perception, and appetite, respectively (GP VI: 605/AG 219). But the list of attributes varies: power and knowledge (A VI, 4: 1465; A VI, 4: 1531; A VI, 4: 1542; A VI, 4: 1618; DS I, 411); power, knowledge, goodness, justice (GP VI: 602); being, action, life, knowledge, power (A VI, 4: 2307). Interestingly, in some texts Leibniz includes space as the imperfect correlate of God's 'immensity'. See e.g. A VI, 4: 520 and, for comments Futch (2008: 172–83). For more on Leibniz's derivation of creaturely properties from God's attributes, see especially Rutherford (1995: 27, 178–9) and Adams (2007).

¹⁹⁴ For 'emanation', see A VI, 4: 1549; GP III: 72, 430; GP VI: 440. For 'outflowing', see GP II: 295 (*profluere*), GP VII, 305 (*promanere*). See also A VI, 4: 520, 990, 2307; GP VI: 27, 602, 615. In his early 1670 Preface to an edition of Marius Nizolius' *On the True Principles of Philosophy* (1553), Leibniz disapproves of the employment of 'metaphorical' terms in philosophy and explicitly mentions '*emanatio*' as an example of one such term (GP IV: 148). The irony is, however, that Leibniz continues to use 'emanation' and related vocabulary throughout his career. Besides 'emanation' and 'outflowing', Leibniz uses the terms 'diffusion' (GP II, 278) and 'continual fulguration' (A VI, 4: 1549) in order to characterise the relation holding between God and creatures. As Fouke (1994: 174, n. 14) points out, 'fulguration' (*fulguration*) is an almost literal translation of the Greek *perilampusis*, one of Plotinus' words for referring to the relation between the One and finite things. See *Enneads* V, 3, 15 and V, 1, 6.

¹⁹⁵ See Proclus, *Elements*, Prop. 28, 29; Plotinus, *Enneads* II, 3, 18. In locating the Platonic and Neoplatonic sources quoted in this paragraph I have been helped by O'Neill (1993: 27–35), Mercer (2001: 184–92), and Fouke (1994).

can make intuitive sense of it by drawing on a traditional metaphor: the light of the sun's rays exists as long as the sun shines.¹⁹⁶ But an image seems not to depend on its model diachronically but only in its origin. Think of a picture of a landscape: once it has been produced it is not dependent on its model for the continuation of its existence.¹⁹⁷ For another, emanation expresses a stronger commonality between cause and effect than the one expressed by imitation. A builder can build a building as a copy or image of another building. However perfectly alike the resulting building may be, it will remain ontologically distinct from its model: it will only resemble it, perfectly or otherwise.¹⁹⁸ But emanation carries with it the idea of a (non-depleting) unfolding of the cause's *own being* into the being of the effect.¹⁹⁹ The expression 'own being' is admittedly vague, and we will have to wait till section 4 to get more closely to grips with it. Meanwhile, I shall only note that, in the sense that concerns us here, the word 'being' is meant to refer not only to the existence of things – *that* things are – but also to their ontological character or complexion – *what* things are. For its part, 'own' is meant to underline the contrast between the ontological externality of items standing in an imitation relation on the one hand, and the stronger, internal connection in which cause and effect stand in the emanative causal relation on the other. Again, a metaphor may be useful at this point. Consider a snake, a python. And suppose the python twists itself in such a way that it 'engenders' a hammock. The resulting hammock continuously depends on the existence of the python: there is a hammock as long as the python exists. Yet more than continuity and dependence in existence is involved in their relation. For the python itself constitutes the hammock and, in so doing, gives to it its peculiar ontological character (a certain softness and flexibility, say). Following Fouke (1994: 175), we can capture the main insight in this metaphor by

¹⁹⁶ For the continuity of the emanative process and its explanation through the metaphor of light see *Enneads*, II, 3, 18. Leibniz makes use of this traditional metaphor, too. See A VI, 4: 1573; GP IV: 440.

¹⁹⁷ For a similar example, see Parkinson (1965: 98). The image projected on a screen by, say, a film projector also depends continually on its source. But the sort of relation involved in this case is closer to the notion of efficient causation than to that of imitation or exemplary causation.

¹⁹⁸ One might point out that perfect likeness would entail numerical identity if the principle of identity of indiscernibles holds true. Perhaps so. But the likeness predicated of God and creatures is not of course a case of perfect likeness. In *S. Th.*, I, q. 4, a. 3, Aquinas remarks that perfectly alike things would indeed be identical: identical *in their likeness*.

¹⁹⁹ For emanation as a non-depleting act, see A VI, 2: 490: '(causa per emanationem) est causa efficiens sine mutatione sui'. See also Proclus, *Elements*, Props. 26, 27: 'Every productive cause produces the next and all subsequent principles while itself remaining steadfast'; '[F]or the product is not a parceling-out of the producer... Thus the engenderer is established beyond alteration or diminution'.

saying that, unlike an imitated model, the emanative cause is the ‘very stuff’ out of which the effect is made. Let us call this thesis the ‘Being-Commonality Thesis’ (BCT). Importantly, note that, however strong, BCT does not affirm the full identity between the emanative cause and the emanated effect. For, while the hammock depends on the python, the reverse does not hold. Identity, however, is symmetrical.²⁰⁰

Is BCT part of Leibniz’s conception of the relation between God and finite beings? As most scholars would surely agree, the answer to this question must be a unanimous ‘no’. However, BCT will accompany us almost every step of the way, setting the focus for our particular slant in addressing Leibniz’s understanding of the God/things relationship. For, as I see it, even though it should in the end be rejected as part of Leibniz’s permanent position, BCT does nonetheless represent a constant problem for him, one which lurks at crucial junctures of his philosophy, especially those related to his Platonic conception of the relation between the infinite being and finite beings. Indeed, there is a period in Leibniz’s thought when such a conception exerted so much pressure on him that he was forced to (temporarily) embrace BCT. I shall present some relevant texts in a moment and consider them in more detail in section 4. In the remainder of this section, I would like to pay attention to one reason which many will probably take as enough evidence for dismissing BCT as a component of Leibniz’s philosophical theology but which I regard as ultimately insufficient. Consideration of this reason will help me to underscore the interest of the particular angle I have chosen to adopt in pursuing the Leibnizian construal of the relation between God and things.

One thing that is clear about the question of whether BCT does or does not form part of Leibniz’s conception of the relation between God and things is that it cannot be settled by simply pointing to the fact that Leibniz employs ‘emanation’ and related vocabulary for referring to the kind of relation holding between them. For ‘emanation’ has more than one meaning and can accordingly be used for more than one purpose. It can be

²⁰⁰ The following objection may be raised at this point: *Premise*: the metaphor confuses the hammock – which the python ‘engenders’, as I said (using quotation marks) – with something which merely assumes the form of a hammock, namely the python itself. In other words, there is ultimately no hammock distinct from the python but at best a hammock-shaped python. *Conclusion*: the metaphor breaks down. I concede the premise but not the conclusion. For this is precisely what the metaphor aims to capture: understood as the emanated ‘content’ of an emanating God, finite things are (prima facie) at the risk of becoming modes of God. (‘Prima facie’, I say, for this is not to suggest that there is no way of elaborating the notion of emanation so as to render it consistent with an account of finite things as ontologically distinct from the emanating principle. I shall develop one such way in section 5).

used, as we know, for expressing the continuity of God's production of things. Versions of emanative causation that subscribe to the Continuity Thesis while rejecting BCT abound in medieval philosophical theologies. According to Aquinas, for example, creation falls adequately under the heading of emanation to the extent that creation is a continual act of conservation of finite things in existence. As far as the emanated content is concerned, however, he is adamant that nothing like a commonality of being in the sense captured by BCT can be predicated of God and creatures.²⁰¹

That Leibniz embraces emanation only in this minimal sense has been advocated by some scholars. According to Burgelin, the concept of emanation, without contradicting that of creation, emphasises, for Leibniz, nothing more than the continuous character of the metaphysical dependence of finite beings on God (1959: 34, 184–8).²⁰² Burgelin's interpretation is primarily motivated by his interest in distancing Leibniz from Spinoza's *necessitarian* conception of emanative causation. That Leibniz's account of emanation is not necessitarian I shall not dispute. But I think that the mere rejection of necessitarianism is not sufficient evidence for restricting his view of emanative causation to the Continuity Thesis alone. In other words, it is possible that Leibniz rejected the necessitarian aspect of emanation while maintaining BCT. This will surely seem counterintuitive, for the idea of emanation as flowing of being is usually associated with that of *necessary* flowing of being. But the association is not necessary; or, at any rate, Leibniz does not seem to have regarded it as necessary. Let me explain.

An interesting set of passages comes from writings of 1675–1676, the final years of Leibniz's Paris Period. In these years, Leibniz was for the first time learning about some of the contents of Spinoza's metaphysics in conversation with Walther von Tschirnhaus, who knew parts of Spinoza's *Ethics* and whom Leibniz met in Paris in early October 1675²⁰³,

²⁰¹ See *S. Th.*, I, q. 45, a. 1

²⁰² As noted earlier, Leibniz defines creation as a continuous act in several texts from different periods. See n. 55.

²⁰³ See Antognazza (2009a: 161, 167–8). Leibniz's first encounter with Spinoza's philosophy was, however, in 1670–1671, when he read the *Tractatus Theologico-Politicus* shortly after its publication. See Laerke (2010), Antognazza (2009a: 168).

and with Henry Oldenburg, who provided Leibniz with copies of the last three letters he received from Spinoza.²⁰⁴ Commenting on the first of these letters, Leibniz writes:

- [a] If all things emanate from the divine nature with a certain necessity (*necessitate*), and all things that are possible exist, then bad things may equally well happen to the good person and to the bad one. Hence moral philosophy would be eliminated. (A VI, 3: 365)²⁰⁵

In this passage, dated by the Academy editors to October 1676, Leibniz clearly rejects Spinoza's necessitarian conception of emanation, which in his letter to Oldenburg Spinoza formulates as the view that 'everything follows inevitably from the necessity of God's nature' (A VI, 3: 364). Although for somewhat different reasons, similar worries concerning unacceptable implications of a necessitarianism conception of things' origin are expressed by Leibniz in his *Principium meum est, Quicquid Existere Potest, Et Aliis Compatibile Est, Id Existere*, a brief text composed no more than two months later and dated by Leibniz to 12 December 1676.²⁰⁶ Again, as in [a], in this text Leibniz rejects Spinoza's thesis that 'all possibles exist', from which it follows that the God 'in whom the pious believe' is impossible:

- [b] If all possibles were to exist, there would be no need of a reason for existing, and mere possibility would be enough. So there would not be a God, except insofar as it is possible. But a kind of God in whom the pious believe would not be possible, if the opinion of those who believe that all possibles exist were true. (A VI, 3: 582/DSR 105)

So, on this basis, we can conclude that, in October 1676 and December 1676, Leibniz clearly rejects necessitarianism.

But now consider this:

²⁰⁴ The three letters, alongside Leibniz's annotations, are published in A VI, 3: 324–71. Leibniz met Oldenburg in London, October 1676, when he left Paris for Hanover via England and Holland (November 1676). See Laerke (2018: 3–4).

²⁰⁵ I am grateful to Dr. Daniel Hadas, Lecturer in Medieval Latin at King's College London, for helping me with the translation of this passage.

²⁰⁶ See also *De Existentia*, dated by the Academy editors to December 1676, which also contains clear anti-necessitarian statements (e.g. A VI, 3: 588).

- [c] [A]ll things are distinguished, not as substances (i.e. radically) but as modes...The essence of all things is the same, and things differ only modally...[N]o thing really differs from another, but all things are one, just as Plato argues in the *Parmenides*. (A VI, 3: 573/DSR 93–5)²⁰⁷

This striking passage, penned in November 1676, belongs to a family of texts, all from 1675–1676, in which Leibniz shows advocacy of a monistic theory of particulars as modes of a single substance.²⁰⁸ Importantly, some of these texts suggest that Leibniz’s view in these years is not quite that God and things are identical, but rather that things inhere in God’s essence, a view *prima facie* consistent with divine transcendence, even if not with *full* divine transcendence. Thus, in one text, Leibniz writes that God is not ‘the same as (*idem*)...nature, fate, fortune, necessity, the world’ (A VI, 3: 474/DSR 27). In another related text, however, he says that ‘things are *in* God...as a property of some subject is contained in the essence of the same subject (*in ejusdem subjecti essentia*)’ (A VI, 3: 370; my emphasis). As I said, we shall take up these and other similar passages at greater length in section 4, so here I shall not elaborate. At this point, the only reason I bring [c] to the fore is that it reveals that, at least during this brief time span, Leibniz embraced BCT – or something very similar to it – *and* at the same time rejected necessitarianism: [c] was written in November 1676, that is, right in the middle of a period, namely October 1676–December 1676, when Leibniz has already distanced himself from Spinoza’s ‘fatalist’ version of emanative causation, as we learn from [a] and [b]. As strained as the idea of free or controlled emanation may seem to be, this suggests that Leibniz saw no necessary, conceptual connection between necessitarianism and BCT.²⁰⁹ Such a connection would certainly hold if God and things were fully identical. But that is not Leibniz’s position in this period, nor what BCT asserts – recall the python and the hammock, which are not identical.

That things, as Leibniz says, can be ‘in God’ as a ‘property is contained in the essence of the same subject’ without being necessary may be hard to swallow. Furthermore,

²⁰⁷ I have cut off those parts of the passage which articulate Leibniz’s argument. We shall meet the full passage later.

²⁰⁸ Since Adams’ (1994) and Kulstad’s (1994) pioneering contributions to this topic, the prevailing tendency in Leibnizian scholarship is to hold that the monistic statements in these texts are not merely experimental in character but actually represent Leibniz’s view in the years 1675–1676. The argument that follows assumes that this is true.

²⁰⁹ I owe the phrase ‘free or controlled emanation’ to Mercer (2001: 185).

one could object that the textual argument I have mounted requires that Leibniz disavow necessitarianism *from* October 1676 *to* December 1676, rather than *in* October 1676 and *in* December 1676. However, further passages can be summoned to strengthen the case I am trying to make. Consider this one, coming from a set of metaphysical corollaries listed by Leibniz in his earlier *Dissertatio de Arte Combinatoria*: ‘God is substance; creature is accident (*accidens*)’. This is little short of the monistic view in [c]. And yet, note that the term for creature is ‘accident’, a kind of property that, while flowing from the essence of the thing in which it inheres, it does so *contingently*: ‘An accident of a thing is a contingent predicate’, as Leibniz puts it in one piece (A VI, 4: 574/DSR 94). Hence, even if BCT is true, it remains possible for God to *choose* to outflow his being or, more precisely, the specific combination of compossible things that he understands to be best.²¹⁰

* * *

So much for necessitarianism and BCT. What I would like us to do now is to try to get a little deeper into BCT by directing our gaze towards a notion which features prominently in those contexts where the relationship between God and things is conceptualised in terms of emanative causation: that of perfection. ‘The perfections of nature are emanations of God (*émanations de la Divinité*)’, we read in one text (GP III: 417). Or, as Leibniz writes in *CDe*, God immediately concurs in the ‘existence, actions, and modes of existence and qualities’ of creatures ‘insofar as there is something of perfection in them, which always outflows (*profluit*) from God’ (GP VI: 440). As much centrality in connection with emanation – or outflowing – is given to perfection in other writings, such as *DM* § 32 (A VI, 4: 1580), *On the true Mystical Theology* (DS I: 410), and *PNG* § 9 (GP VI: 602).

Now, Leibniz uses ‘perfection’ in different senses. When employed in connection with emanation, the sense of ‘perfection’ at work is that of an absolute, purely positive

²¹⁰ Consistent with this, Adams (1994: 125–6) has convincingly argued that what drives Leibniz’s most decided opposition to Spinozism in 1675–1676 is not the view that God is external to the world but rather his conviction that God is a person having understanding and will. See e.g. A VI, 3: 474–5/DSR 27: ‘God is not as some represent him – a Metaphysical something (*quiddam Metaphysicum*), imaginary, incapable of thought, will, or action, so that it would be the same as if you were to say that God is nature, fate, fortune, necessity, the world. Rather, God is a certain substance, a person, a mind...It must be shown that God is a person, i.e., an intelligent substance’. See also A VI, 4: 588.

property or property involving no limit, negation or privation.²¹¹ So understood, perfections designate properties of God, the ‘most perfect being’ or ‘subject of all perfections’ (A VI, 3: 579; cf. A VI, 3: 519, 572). Accordingly, the emanative act consists in God’s continually instantiating limited versions of his absolute properties or perfections.²¹² In its most general expression, the result of emanation is thus a world of entities which possess, as Leibniz says in the quoted lines from *CDA*, ‘something of perfection’ (*aliquid perfectionis*): they exemplify intensionally-bounded correlates of the properties possessed by God absolutely or unlimitedly. Speaking of our souls in the *Theodicy*, Leibniz writes:

The perfections of God are those of our souls, but he possesses them in boundless measure; he is an Ocean, whereof to us only drops have been granted; there is in us some power, some knowledge, some goodness, but in God they are all in their entirety. (GP VI: 27/H 51)

For Leibniz, then, the most basic notions which articulate his understanding of the God/things relationship when conceptualised as emanation of perfection are those of absolute and limited. It is on this pair of notions which we shall concentrate in what follows. If Leibniz’s conception of emanation is a conception of emanation of perfection, and if absolute/limited are the basic categories articulating his conception of perfection, then we may expect to gain more clarity about BCT by focusing on those categories. Our leading question will be this: what does it mean for two items to relate as the absolute to the limited? As I will try to show, it is in connection with this question that Leibniz’s indebtedness to Platonic philosophy is most apparent and fundamental. And, as we shall see in section 4, it is this indebtedness to Platonic philosophy that will bring him some serious problems.

²¹¹ For this sense of perfection, see A VI, 3: 538; A VI, 4: 2037. For absolute as positive (or ‘affirmative’), see GP VI: 383: ‘every reality which is purely positive or [*ou*] absolute is a perfection’. See also A VI, 3: 519; GP VI: 112: ‘Perfection is positive, that is, an absolute reality’. For absolute/positive as non-limited, see A VI 4: 538 and A VI, 4: 36: ‘absolute is that the concept of which is unlimited’. For limitation as privation, see Leibniz 4/14 May 1698 letter to Morell: ‘The privative is nothing other than the limited (*Le privatif n’est autre chose que le limites*)’. As negation: A VI, 4: 2037. For discussion and more texts, see Adams (1994: 113–9).

²¹² In some early writings, Leibniz describes the process of limitation of absolute properties as an ‘addition’. See e.g. A VI, 3: 502; A VI, 3: 520. But this cannot be taken at face value: if limitation were an addition, the universal coming forth of beings would be grounded on two positive principles, and Leibniz’s position would collapse into a Manichean view, a view he expressly rejected. See Gr. 364, A II, 1: 272.

3. Leibniz's Platonism: the logical priority of the absolute

3.1. Preliminaries

There is no simple answer to the question of what exactly Platonism is. For example, in her study of the origin and development of Leibniz's metaphysics, Christia Mercer (2001: 173–200) singles out six themes, all of them quite fundamental, that can be grouped under the general umbrella of 'Platonism'. And each of these themes branches off into a wide range of further distinct 'Platonist assumptions'.²¹³ Thanks to the work of Adams (2007), however, I think it is possible to pinpoint a particularly important and characteristic kernel of Platonic doctrine. This is the view that, to put it in Adams' words, the imperfect or limited is 'understood in terms of [its] relation to the most perfect', rather than the other way around (2007: 91). The idiom 'understood in terms of' might appear somewhat vague at first, but Adams' analyses make it sufficiently clear that, at least as far as Leibniz's case goes, what is specific to the doctrine at play is the affirmation that the perfect enjoys *logical* priority over the imperfect.²¹⁴ In turn, logical priority means not just any kind of epistemological priority whatsoever, but *definitional* priority or priority in account – 'in *logoi*'; hence 'logical'.²¹⁵ That is, on the Platonic construal of the relation between the absolute and the limited, the absolute features in the definitions of finite beings as a logically prior constituent.²¹⁶ In this section we shall consider some of the evidence that

²¹³ To be precise, Mercer refers to ten such assumptions. See Mercer (2001: 171–200, 479–80).

²¹⁴ Of course, this is not to the exclusion that, from a Platonic standpoint, the absolute enjoys other forms of priority over the imperfect too, particularly ontological priority. As we shall see later, however, when predicated in company with other Leibnizian views, the ascription of logical primacy to the absolute importantly affects the way in which it exerts its ontological primacy.

²¹⁵ I take this to be implied in Adams' treatment of Leibniz's construal of the priority of the perfect in Adams (2007: 106–16). See also Adams (1994: 116–8). In the case of other modern philosophers, the construal of the priority of the perfect as definitional primacy is, as it seems to me, less clear. See n. 221.

²¹⁶ Some examples, coming from Aristotle, of logical priority or priority 'in *logoi*' in the sense I am pointing out: the right angle over the acute angle, for an account of the latter is given in terms of the former (*Met.* M 8, 1084b10–14; *Met.* Z 9, 1034b30–33); letters over syllables, for an account of syllable includes that of letter (*Met.* Z 9 1034a26–27).

With respect to the adequacy of thinking of logical priority, in the indicated sense, as characteristic of the Platonic view of the perfect/imperfect relation, and acknowledging that there are obvious risks in simplifying such a complex doctrine as Plato's theory of Forms, it may be useful to recall here that, for Plato, the way in which Forms – the end-points of questions about definitions, i.e. questions of the form 'What is X' – unify the multiple instances falling under them is precisely by being *common to*, or *partially contained in*, these instances, which in turn fall short of unqualifiedly instantiating the pure, paradigmatic items to which they relate. To use Plato's words, a Form is a 'some-one thing that holds of all' (*Meno*, 73cd) or 'what is the

supports ascription of this view to Leibniz. Then, in section 4, we shall resume it in connection with BCT.

3.2. *The logical priority of the absolute/positive infinite/God*

Perhaps the best place to begin is in writings related to Leibniz's polemical encounter with Locke in the late 1690s and early 1700s. This is not surprising, for Locke was among those who explicitly rejected the logical primacy of the absolute over the limited. Commenting on Locke's *Essay*, Leibniz writes:

[T]he true infinite...is found only in the Absolute, which lacks parts and influences composite things insofar as they result from the limitation of the absolute. So, positive infinity being nothing other than the absolute, we can say that there is in this sense a positive idea (*idée*) of the infinite, and that it is prior (*anterieure*) to that of finite. (A VI, 6: 7; *Quelques Remarques sur le Livre de Mons. Lock intitulé Essays of Understanding*)

[T]he true infinite, strictly speaking, is only in the *absolute*, which precedes (*anterieur*) all composition and is not formed by the additions of parts. (NE 157)

[T]he idea of the absolute is internal to us, as is that of being. (NE 158)

At least five theses are asserted in these passages:

- (1) The positive infinite is nothing but the absolute.
- (2) We are in possession of the idea of the absolute ('it is internal to us').
- (3) The idea of the infinite is prior to that of the finite.

same over all' (*Meno*, 75a) and 'present' in all (*Phd.* 100d), whereas particulars only 'participate' or 'partake in' it (*Phd.* 102b, *Rep.* 476d). Of course, these remarks bring out a structural feature of a Platonic conception of the perfect/imperfect *relation*, leaving plenty of room for discrepancies as to exactly how the related *items* are to be construed. To be sure, if we accept, as most commentators do, that Leibniz is committed to some form of nominalism, then he cannot adhere rigidly to the Platonic scheme: the perfect or absolute is not a universal. Furthermore, the most perfect being – the concepts of whose attributes, as we shall see, Leibniz sees as primitive concepts logically prior to those of finite things – is a 'concrete thing' (A VI, 4: 558: *concretum*) or 'singular substance' (A VI, 4: 559: *substantia singularis*), whereas a Platonic Form, as Aristotle observes, 'indicates a *such*, not a *this*' (*Met Z* 13, 1039a15). It would be interesting to compare Leibniz's conception of God with that of Malebranche – also a Platonist-bent thinker – who at least once calls God 'universal being' (*l'être universel*)' (*Recherche* III, 2, 5/OM I: 235).

(4) The true infinite is not formed by the addition of parts.

(5) Finite (composite) things result from the limitation of the absolute.

Jointly considered, I think these theses provide us with a good deal of evidence for attributing a Platonic construal of the absolute/limited relation to Leibniz. Before explaining why, let me first say something about (1).

(1) speaks about ‘positive infinite’. This kind of infinite is the same as the ‘true infinite’ referred to in (4). In particular, the qualification ‘positive’ is meant to distinguish what Leibniz regards as the true or genuine infinite from both the infinite understood as the possibility of uninterrupted progress in the addition of parts and as the result of our negating finite qualities that we possess.²¹⁷ While ostensibly different, these conceptions of the infinite are part of one unitary view, for, as Adams observes, the construction through universal quantification underwriting the former is implicitly negative: to say, for instance, that God has infinite knowledge (omniscience) or knowledge of everything is to say that there is nothing he does *not* know (2007: 93–4). And, indeed, both conceptions are part of Locke’s view on infinity, which is Leibniz’s explicit target in the quoted passages.²¹⁸

Now, in an important recent contribution, Antognazza (2015c) has argued that the conception, predicated in (1), of the positive infinite as absolute tracks Leibniz’s notion of the ‘hypercategorical infinite’, which Leibniz equates with God himself (GP II: 315). In doing so, the view Leibniz appears to wish to capture is that God is *pure* being. That is, God is the being who is beyond (‘hyper’) any *determinate way of being*, the being who purely and unqualifiedly is.²¹⁹ This reading is borne out by Leibniz’s language in (1), for, as

²¹⁷ See A VI, 6: 7; NE, 159, 228; GP II: 314–5. Leibniz also distinguishes the true infinite from the infinite conceived of as a collective whole or ‘categorical infinite’. Following a long-standing tradition, Leibniz rejects the possibility of this type of infinite. See GP II: 315. For a magisterial treatment of the different senses in which ‘infinite’ is spoken of, see Antognazza (2015c). I am indebted to her in this and the next paragraph.

²¹⁸ See *Essay* II, xxiii, § 33, where Locke says that the idea of the infinite being is obtained by ‘enlarging’ our simple ideas of reflection. For Locke’s negative conception of infinity, see *Essay* II, xvii, § 15. I owe both references to Adams (2007: 93–4). See also Adams (1994: 115–6).

²¹⁹ If this is correct, I think that a fairly direct link can be established between Leibniz’s conception of God and the view that God is the *ipsum esse subsistens* – the being whose essence is nothing but to be. In this sense, note that that God is beyond any *determinate way of being* does not mean that he is beyond *being*: God

Parkinson observes, in employing the qualifier ‘positive’ Leibniz may have had in mind – besides Locke’s – the view which is summed up in Spinoza’s phrase that ‘determination is negation’ (1965: 81).²²⁰ Thus God, *qua* positive infinite, is beyond all negation and hence all determination. Also, there is at least one text in my ken in which Leibniz expressly says that God is ‘Ens’ (A VI, 4: 159), which Adams suggestively – and correctly, in my opinion – glosses as the view that God is ‘pure Being’ (1994: 122, n. 16). On the basis of these remarks about (1), we can conclude that, for Leibniz, the positive infinite is the true infinite, and that the true infinite is nothing but the absolute. Further, we can conclude that

(6) the absolute (and hence the positive and true infinite) is God himself.

Let us now move towards trying to establish the logical primacy of the absolute. If I succeed in establishing this, then, given (6), it will also follow that, for Leibniz, God (the absolute) is logically prior to finite beings (the limited).

When we come to the logical primacy of the absolute, the most interesting points are given, I think, by theses (3) and (5). For, in quite plain language, (3) asserts that the *idea (idée)* of the infinite is prior to the *idea* of the finite. Given (1), it follows from this that the *idea* of the absolute is prior to the *idea* of the limited. This being the case, it is at least plausible to think that Leibniz embraces the logical priority of the absolute over the limited: the absolute would be *notionally* presupposed by the limited. One could object that Leibniz’s mere talk of ‘idea’ does not license us to read him as implying the logical priority of the absolute. For, as suggested earlier, not every type of priority ‘in idea’ or epistemic priority is definitional priority²²¹, and what we need in order to establish the logical priority

is being itself. Persuasive argumentation for the Platonic underpinnings of the conception of God as the *ipsum esse subsistens* can be found in Berti (2001: 204–7).

²²⁰ See Spinoza, Ep. 50 (Gebhardt IV: 240).

²²¹ Think of Descartes’ *Third Meditation*, for instance. There he says that he finds in himself an ‘idea of God’ – the idea of an ‘infinite substance’ – and that this idea must be ‘in some way prior to [his] perception of the finite’ (AT VII: 45; cf. AT VII: 40–1). As the reference to perception reveals, this is clearly meant to express the epistemological priority of the infinite over the finite. Yet it does nothing to sustain its logical primacy. First, the argument on which it rests claims the idea of the infinite to be a necessary point of reference for recognising the meditator’s own finitude or imperfection, which does not seem to entail any definitional dependence on the referential point (AT VII: 46, 1–5). Secondly, and more importantly, the conclusion that Descartes extracts is ontological: there must be an actually existing being – the cause of the idea of God – having as much *formal* reality as there is objective reality in the idea (AT VII: 45, 9–18). That Descartes’ position in the *Third Meditation* (and here I am confining myself to this meditation only) does not support the

of the absolute is its definitional priority. However, it is interesting that, in the first quoted passage, Leibniz asserts (3) alongside (5). According to (5), recall, finite things result from the limitation of the absolute. Given that, as we know from (3), the idea of the infinite/absolute is prior to that of the finite and that (3) is deployed alongside (5), it seems reasonable to take (5) as implying that the idea of the imperfect is formed by limiting (negating, determining) the idea of the unlimited absolute. This means that the idea of the unlimited absolute would figure in the definitions of the imperfect as a logically prior constituent: an account of the imperfect would be given *in terms of* the perfect. The same conclusion is suggested in a letter of May 1698, where Leibniz says to Morell that the multiple operations of finite things can be explained by appealing to the binary system of numerals, i.e. through combinations of 1 – ‘the positive’ – and 0 – ‘the privative’ or ‘limited’ (A VI, 4: 560): the number 1 features in, and is common to, the definitions of all derivative beings and hence is logically presupposed by them.²²² Hence, the absolute is, for Leibniz, logically prior to the limited.

Or is it?

3.3. *Do we really possess an idea of the absolute? Problems for Leibniz’s Platonism (and their solution)*

Consider (2), the claim that we are in possession of the idea of the absolute. Arguably, (2) is crucial for a Platonic construal of the absolute/limited relation to be possible. For, in the absence of a positive concept of the infinite, it would seem that the concepts of finite beings cannot be constructed, as I have just argued (5) implies, by limiting the concept of the infinite.²²³ Yet Leibniz’s attitude towards this thesis varies: whereas he affirms it in (2), there are other contexts in which he expresses some hesitation. For instance, in *Introduction* (ca. 1685–1687), he writes that ‘an analysis of concepts by which we are enabled to arrive at primitive notions, i.e. at those which are conceived

logical priority of God over finite substances is shared by Kenny (1958: 134). See n. 239 below for the relevant quotation.

²²² In an earlier writing, Leibniz offers the same explanation of the origin of things with ‘Ens’ (God) standing for ‘1’ and ‘Nihil’ for ‘0’. See A VI, 4: 159 (1679 [?]). See also DS I: 410–1.

²²³ That we (or at least some human beings) possess positive knowledge of the absolute seems to be recognised by Plato himself. See *Rep.* VII, 516b.

through themselves, does not seem to be in the power of man' (A VI, 4: 530/MP 8).²²⁴ A primitive concept (*notio primitiva*), Leibniz explains, is one which 'cannot be analysed into others' and is 'conceived through itself' (A VI, 4: 528/MP 7), an explanation which matches pretty well Leibniz's definition of the absolute, set out elsewhere, as 'that which is thought with no other thing being thought (*quod cogitatur alio non cogitatio*)' (A VI, 2: 489). So, when Leibniz says in *Introduction* that the analysis of derivative concepts into primitive ones 'does not seem to be in the power of man', his suggestion seems to be that a positive idea of God or of the absolute lies beyond our reach. This casts doubt over (2)'s truth and thereby over the very possibility of a Platonic understanding of the absolute/limited relation.

This conclusion seems to be reinforced by other remarks Leibniz makes in *Introduction*. For, in keeping with (6), he goes on to say that a primitive (and hence, as we know, absolute) concept 'can only be [that] of...the supreme substance, namely God', for only God can be thought without anything else being thought. That is, primitive concepts are the concepts of the attributes of God.²²⁵ So, again, the conclusion we seem to reach is that, *pace* (2), we do not possess an idea of God – the absolute or positive infinite. And the difficulty deepens when Leibniz goes on to offer his reason for doubting the possibility of reducing derivative concepts into the primitive concepts of God's attribute – what he calls 'ultimate analysis':

But it can be doubted whether any concept of this kind [*sc.* primitive or absolute] appears *distinctly* to men (*hominibus distincte*). (A VI, 4: 528/MP 7; my emphasis)

The suggestion here, I take it, is that what renders ultimate analysis impossible is the fact that we lack a distinct idea of God. Now, this is the same as to say that we have a *confused* idea of him.²²⁶ But confusion does not designate any positive characteristic of ideas but a form of limitation or negation. Therefore, Leibniz's explanation of the impossibility of ultimate analysis on the ground that the idea of God does not appear 'distinctly to men'

²²⁴ See also A VI, 4: 159.

²²⁵ See A II, 1: 437–8; A VI, 6: 5; GP III: 247, GP IV: 425. To be precise, in these texts Leibniz says that the primitive concepts are the '*attributes* of God'. I take it, however, that what he means is that they are the '*concepts* of the attribute of God', on which see Parkinson (1965: 81, n. 1).

²²⁶ This is supported by Leibniz's remarks at A VI, 4: 529, 1–5.

seems to boil down to this: ultimate analysis is impossible because we do not have any positive idea of God but only one involving limit or negation. The tension with (5) is clear. For how are we supposed to construct our limited ideas, as (5) demands, by limiting or negating the idea of the absolute if our idea of the absolute is already limited?

I believe that Leibniz would not have regarded this line of reasoning as posing any serious challenge to the logical primacy of the absolute, however. Immediately after having contended that the idea of God may not appear ‘distinctly to men’, he writes:

But we can have no derivative concept except by the aid of a primitive concept, so that in reality nothing exists in things except through the influence of God, and nothing is thought in the mind except through the idea of God, even though we do not understand distinctly enough the way in which the natures of things flow from God, nor the ideas of things from the ideas of God. This would constitute ultimate analysis, i.e. the adequate knowledge of all things through their causes. (A VI, 4: 529/MP 7; my emphasis)

Far from denying it, here Leibniz reinforces the view that men *are* incapable of having a distinct concept of God by saying that ‘we do not understand distinctly enough the way in which the natures of things flow from God, nor the ideas of things from the ideas of God’. And yet, at the same time, he leaves no room for doubt that, in his opinion, primitive notions *are* required in order to understand derivative ones: ‘we can have no derivative concept except by the aid of a primitive concept...and nothing is thought in the mind except through the idea of God (*per Dei ideam*)’. I think this reveals with particular clarity Leibniz’s firm commitment to the definitional priority of the absolute. For the analysis of derivative concepts into primitive ones is motivated by no other reason than to establish *real definitions* of things, definitions that exhibit the logical possibility of the things defined: we attain a real definition of something by analysing it into its logically prior constituents.²²⁷ Again, one could object that such definitions will be beyond our reach if the analysis of derivative concepts into the concepts of the absolute attributes of God is beyond our reach. In turn, this would seem to threaten the whole structure of a Platonic construal of the priority of the absolute over the limited. Yet, on the other hand, Leibniz does not appear to think so. Why? How can Leibniz uphold a Platonic absolute/limited scheme while acknowledging that ultimate analysis is impossible?

²²⁷ See A VI, 4: 587; A VI, 4: 158, 196, 540–1. For Leibniz’s notion of real definition, see A VI, 4: 540–1, 1568, 1617.

I think that the answer to this question, or anyhow one possible answer, hinges on a distinction between epistemological and logical priority.²²⁸ In short, the impossibility of ultimate analysis is a problem *quoad nos* or, in Leibniz's words, '*hominibus*': we have to content ourselves with pursuing our analyses as far as we can. In *De Organo sive Arte Magna cogitandi* (ca. 1679), Leibniz writes:

Since, however, it is not in our power to demonstrate the possibility of things in a perfectly a priori way, that is, to analyse them into God..., it will be sufficient for us to reduce the immense multiplicity of them to a few, whose possibility can either be supposed or postulated, or proved by experience. (A VI, 4: 159/MP 3)²²⁹

But this does not threaten the Platonic structure of the *objective* logical order of concepts. That, it seems to me, is the moral to be extracted from the following passage of the *New Essays*:

[W]e start with the coarsest and most composite ideas. But that doesn't alter the fact that *in the order of nature* the simple comes first. (NE 84; my emphasis)

In this particular text, 'the simple' stands for 'general principles', which oppose 'particular ones' (NE 84–5). However, the text occurs in the context of the broader question of whether there are innate notions and principles in man, which I think allows us to take 'simple' as applying to innate ideas in general. Now, the idea of God is the first such idea that Leibniz mentions a few pages before.²³⁰ If so, Leibniz's point can be read as follows. With respect to the subjective order of knowledge, the concepts of finite beings come first. Yet, in the objective order of nature, the concept of God is prior to, or definitionally presupposed by, those of finite beings. Therefore, the fact that we have a confused idea of God does not undermine a Platonic conception of the relation between God and creatures: both can be maintained.

²²⁸ For a similar answer to the one I am about to sketch, see Antognazza (2007b: 124–6). She bases her answer on other texts, however.

²²⁹ In the ellipsis, Leibniz writes 'and nothing', his point thus being that we cannot analyse 'the possibility of things into God and nothing (*resolvere...in Deum et nihilum*)'. This might give the impression that, for Leibniz, there are *two primitives*. I take it that Leibniz cannot accept this Manichean-sounding view at face value, however. See n. 212.

²³⁰ See NE 74, 76.

4. *A (more serious) problem: Platonism, BCT again, rationalism
and substance monism in the last years of Leibniz's Parisian stay (1675–1676)*

Let us take stock. In its strong form, the doctrine of emanation entails not only the Continuity Thesis but also BCT, which affirms a commonality of being between the emanative cause and the emanated effects. Leibniz's conception of emanation is a conception of the flowing of God's perfections into things, which they instantiate as intensionally-bounded properties or imperfect correlates. Consideration of this led us to the relation between the absolute and the limited, which, I have argued, Leibniz construes Platonically. That is, the absolute enjoys logical (definitional) primacy over the limited. Thus God, the absolute or most perfect being, is definitionally prior to finite beings, the primitive concepts of his absolute attributes featuring in the definitions of finite beings. Let us give a name to this last claim: we shall call it the 'Platonic Claim'. We turn now to the connection between the Platonic Claim and BCT.

In approaching this topic, the first thing to be noted is that the Platonic Claim and BCT belong to different domains: the former is a logical thesis about concepts, whereas the latter is an ontological thesis about beings. This prohibits any direct transition from the Platonic Claim to BCT. But it also indicates what is needed for a transition to be permitted. What is needed, in particular, is a Leibnizian premise by virtue of which the relations of logical commonality that the Platonic Claim asserts to obtain between the concepts of God's attributes and the concepts of finite things can be turned into relations of ontological commonality obtaining between God *himself* and finite things *themselves*. Is there any such premise at the interpreter's disposal?

I want to suggest that there is. What I have in mind is what Heinrich Schepers has aptly described as a hallmark of Leibniz's 'strong' or 'hard' rationalism. This is the 'assumption', as Schepers puts it, that there is a perfect 'isomorphism between thinking and being' (2008: 22). That is, truths at the level of concepts perfectly match facts at the level of the beings to which those concepts apply. Call this the 'Rationalist Assumption'.

There are a number of passages that can be used to support ascription of the Rationalist Assumption to Leibniz. Perhaps the most famous of them is § 8 of *DM*, where the ontological claim that substances are complete beings is presented as a consequence of the logical claim that substances have complete concepts: Alexander *himself* – his 'soul' –

contains all of its properties because Alexander's *concept* involves all of its predicates (A VI, 4: 1540–1). But there are others. For example, in his *Animadversiones in Partem Generalem Principiorum Cartesianorum* of 1697, Leibniz says, expressing commitment, that 'whatever can be proved from the concept of a thing can be attributed to that thing' (GP IV: 359). Moreover, in a paper entitled *De Formis seu Attributis Dei* (April 1676), Leibniz advances a view of causation according to which the effect 'is conceived through its cause' (A VI, 3: 514). The same view is implied in many other writings, where Leibniz declares that the conceptual analysis of an effect will exhibit the cause of the effect analysed.²³¹ This hints at a conflation of the concept of cause with that of logical ground.²³² Finally, we shall recall here that the Rationalist Assumption has already shown its head in the previous chapter. Particularly, we saw that in the *PL-M* of 1689 substances' universal relatedness is extracted from the premise that we can construct relational propositions whose related concepts can be saturated by any substances existing in the universe. I suggested that the intermediate premise is what I am now calling the Rationalist Assumption.

Of course, none of these remarks can be accepted as decisive evidence for the unqualified ascription of the Rationalist Assumption to Leibniz. For, it will surely be retorted, there are some salient contexts in which the Rationalist Assumption appears not to be in operation. Think, for example, of the problem of the (composition/divisibility of the) continuum, in relation to which Leibniz quite explicitly voiced the need for distinguishing the 'ideal' from the 'real' order.²³³ And yet, I think that the remarks just provided leave little room for doubt that, at least in *some* contexts, the Rationalist Assumption is in operation. So the relevant question reduces to this: is Leibniz's Platonic conception of the relation between God and things one such context? In the remainder of this section I will try to convince the reader that it is.

I have already anticipated that, in conjunction with the Platonic Claim, the 'sliding' from the logical realm to the real domain captured by the Rationalist Assumption would render BCT true. For, according to the Platonic Claim, the absolute concepts of the divine

²³¹ See e.g. A VI, 3: 490; A VI, 4: 1555; GP IV: 425.

²³² On the cause/reason (or logical ground) conflation, see Adams (1994: 116, 117). This is, however, a complex topic, with passages pointing against the conflation. See Di Bella (2005: 89, n. 2). For the purposes of my argument, though, it is enough that there are some passages supporting the conflation.

²³³ See GP IV: 490.

attributes feature in the concepts of finite things. But, according to the Rationalist Assumption, the order of being perfectly matches the order of concepts. If the latter holds true, then relations of notional commonality such as those deployed by the Platonic Claim will entail relations of ontological overlapping and commonality of being such as those affirmed by BCT. In my judgement, this combination of Platonism and rationalism leading to BCT is precisely what happened in the years 1675–1676, when, as seen earlier, Leibniz did transitorily embrace a monistic view of particulars as modes of a single substance. The clearest, most extended text comes from Leibniz’s *Quod Ens Perfectissimus sit Possibile*, written on November 1676. I quoted and commented on part of it in section 2. Let us now take a closer look at the text in full:

It can easily be demonstrated that all things are distinguished, not as substances (i.e. radically) but as modes. This can be demonstrated from the fact that, of those things which are radically distinct, one can be perfectly understood without another, that is, all the requisites of one can be understood without all the requisites of the other being understood. But in the case of things, this is not so. For since the ultimate reason of things is unique, and contains by itself the aggregate of all requisites of all things, it is evident that the requisites of all things are the same. Therefore, the essence of all things is the same, and things differ only modally, just as a town seen from a high point differs from the town seen from a plain. If only those things are really different which can be separated, or, of which one can be perfectly understood without another, it follows that no thing really differs from another, but all things are one, just as Plato argues in the *Parmenides*. (A VI, 3: 573/DSR 93–5)

Leibniz’s argument in this passage rests on the implicit premise that

(p1) things are conceived through their requisites (*requisita*).

With this in place, it proceeds as follows:

(p2) Things which can be conceived without the requisites of other things are radically (*radicaliter*) distinct, i.e. ‘really’ (*realiter*) distinct or distinct as substances.²³⁴

²³⁴ The adverb *radicaliter* in the second line of the passage is an interlinear qualification added by Leibniz above the word ‘substance’. See A VI, 3: 573, n. 1 and Adams (1994: 130). In taking *radicaliter* and *realiter* as equivalent terms I follow Kulstad (2005: 28). Leibniz offers very similar descriptions for both terms:

- (p3) The ultimate reason of things is unique and contains all their requisites.
- (c1) Things cannot be conceived without another – they are conceived through their ultimate reason (by (p1) and (p3)).
- (c2) Things do not differ radically or as substances but only as modes (by (p2) and (c1)).

At this point, Leibniz has already reached the monistic conclusion that finite things do not differ as substances, but he supplements it with the positive premise that

- (p4) the essence is the aggregate or conjunction of all primary requisites,

from which it follows that

- (c3) the essence of all things (God and finite things) is the same, and things differ only as modes.

This argument has been subject to careful scrutiny in recent years, so it is not necessary to deal with it in great detail here.²³⁵ What I want to retain from it is that, as I read it, it shows with particular clarity how a Platonic conception of the God/things relation can, under suitable and (arguably) Leibnizian assumptions, yield a monistic view of reality or, for that matter, BCT. How so?

‘radicaliter distincta’=‘sine altero perfecte intelligi potest’ (A VI, 3: 573, 7–8); *realiter distincta* = *‘possunt separari seu quorum alterum perfecte sine altero intelligi potest’* (A VI, 3: 573, 14–15).

²³⁵ The best accounts of the argument are, in my opinion, those in Kulstad (2005: 27–43) and Adams (1994: 129–30). Mercer (1999, 2000, 2001) deserves special mention too, but her position stands in stark contrast with Kulstad’s, Adams’, and mine. According to Mercer, ‘Leibniz was never a pantheist of any sort’ (1999: 273). See below.

Requisites are conditions. Above all, in this period, they are logically necessary conditions.²³⁶ Hence, primary requisites are logically primary necessary conditions. As such, primary requisites are nothing other than primitive concepts, the notionally prior constituents into which derivative concepts are resolved through analysis and the exhibition of which provides us with their real definitions and the demonstration of their possibility. Thus, in his *Elementa Calculi* of 1679, Leibniz writes that ‘requirements (*requisita*) are nothing but the terms whose notions compose the notion that we have of the thing’ and the enumeration of which permits us to ‘specify definitions’ (A VI 4: 196/P 18).²³⁷ We find the same account in Leibniz’s *Meditations on Knowledge, Truths, and Ideas* of 1684, where the additional remark is made that, as we know, the ‘requisites’, ‘primitive possibilities’ or ‘irresolvable notions’ are ‘the absolute attributes of God’ (A VI, 4: 586).²³⁸ So far, then, there is much in Leibniz’s argument with which we are already familiar: the absolute/God is logically, i.e. definitionally, prior to the limited/finite beings. In brief, Leibniz embraces the Platonic Claim. And yet the conclusions he draws are striking indeed: things do not differ radically or as substances but only as modes; the essence of all things is the same, and things differ only as modes. What is driving the inference?

The answer, I propose, is the Rationalist Assumption. For note that the conclusions Leibniz draws about *things* are extracted from premises concerning things’ *notions*: given that the concepts of the pure, unanalysable attributes of God occur in the analysis of derivative concepts, the *entities* to which the latter concepts apply turn into modes of God.²³⁹ Driven by the combination of the Platonic Claim and the Rationalist Assumption,

²³⁶ See A VI, 2: 483. For more on the notion of a *requisitum*, see Adams (1994: 117) and Rutherford (1995: 111–5), who take into consideration texts from the 1680s and the mature Leibniz. Leibniz’s understating of this notion appears to have changed over time. See Di Bella (2005).

²³⁷ For requisites as the components of a definition, see also A VI, 4: 549; A VI, 4: 589, A VI, 3: 133; A VI, 3: 462; A VI, 3: 573; GP III: 247, GP VII: 293. For discussion, see Adams (1994: 117).

²³⁸ For later passages, see especially Leibniz’s January 1699 letter to Burnett (GP III: 247) and A VI, 6: 5 (1696). See also GP IV: 425; A II, 1: 437–8.

²³⁹ This is precisely what Kenny seems to have in mind when, in his comments on Descartes’ *Third Meditation*, he writes: ‘Descartes’ scale of being...has only three points: infinite substance, finite substance, and modes. But the way in which modes depend on substance is not the same as that in which finite substances depend on the infinite substance. Modes are *logically* dependent on substance; they *inhere* in it as subjects. Statements with modes for their subjects must be translatable into statements with substances for their subjects, as statements about the Chesire Cat’s smile must be translatable into statements about the Chesire Cat. Created substances are not *logically*, but causally, dependent on God. They do not *inhere* in God as a subject, but are effects of God as creator’ (1958: 134). This comment implies that, if substances are logically dependent on God, then they turn into modes of God or ‘inhere in God as a subject’. And note that Kenny construes logical primacy in exactly the same sense as I have construed it, namely as priority ‘in

Leibniz is thus willing to accept a complete fusion of logical and ontological dependence. By this I do not just mean that the logical primacy of a concept over another concept serves as a criterion of the fact that the being to which the logically prior concept corresponds must *also* enjoy ontological priority over the being to which the logically dependent concept corresponds. What I am saying, rather, and what Leibniz himself is clearly sanctioning in his argument, is that the relation of logical primacy of the concept of a being over the concept of a (prima facie) distinct being *dictates the way* in which the relation of ontological priority/dependence between the beings in question is to be understood. The Platonic doctrine of the logical primacy of the absolute claims the absolute to be related to the limited in such a way that the former is a notional or definitional constituent of the latter. This means that the concepts of God's attributes feature in the concepts of finite beings, and that the latter are therefore composed by, and conceived through, the concepts of divine attributes. Consequently, God is logically common to everything. But if this adequately captures the way in which the concepts of finite things relate to the concepts of God's attributes, then, given the Rationalist Assumption, God is also *ontologically* common to everything. For, as that assumption teaches, truths at the level of concepts perfectly match facts at the level of the beings to which those concepts apply.

The monistic view I am attributing to Leibniz in *Quod Ens Perfectissimus sit Possibile* has been questioned by some scholars, so let me pause on it for a little longer. Commenting on Leibniz's argument in that writing, Mercer points out that if one feels inclined towards monistic interpretations of Leibniz's views during the Paris period, one should remember that Leibniz was a Platonist: 'Leibniz is no more a pantheist than is Plotinus. That is, this is not pantheism, it is Platonism' (2000: 93).²⁴⁰ I am confident we will agree with Mercer that Leibniz is a Platonist, and indeed a very committed one. But why should we think of Platonism and monism as excluding one another? After all, that there is a close philosophical propinquity between them is an old view. According to

account': 'Statements about the Cheshire Cat's smile must be translatable into statements about the Cheshire Cat'.

²⁴⁰ The remark I am making presupposes that 'monism' and 'pantheism' are equivalent notions. Levine (1992) and Kulstad (2005: 22) have rightly pointed out that they are not. However, it is clear that the form of monism operative in the passage from the *Quod Ens Perfectissimus sit Possibile* is a form of pantheism: things are one with their 'ultimate reason', i.e. God, who contains all the requisites of things. Moreover, Mercer's opposition to pantheism is more generally an opposition to monistic readings of Leibniz in the Paris period. See e.g. Mercer (2000: 92, *ad finem*).

Aristotle, for instance, Parmenidean monism is an implication of Platonism.²⁴¹ This reference to Aristotle might seem anachronistic at first, but the interesting point is that Leibniz appears to agree with him; or, at least, he seems to agree that monism *can* be an implication of Platonism. Thus, writing to the Platonist M. G. Hansch later in his life, Leibniz denounces an ‘evil enthusiasm’ or ‘undesirable deification’ that accompanies some versions of Platonic philosophy, such as Averroes’ doctrine of the active intellect, the conception of God as a ‘spirit diffused throughout the whole universe’, and Spinoza’s view that ‘there is one substance, God’ (Dut. II: 224–5/L 594). It is my belief that in 1675–1676 Leibniz was not less aware of the monistic upshots to which Platonism can lead, though he had not yet ruled out the possibility of taking the deifying path of these ‘Platonic enthusiasts’. The fact that, besides Spinoza’s monism, Leibniz mentions in the letter to Hansch the Averroistic active intellect and the doctrine of the soul of the world – God as an immanent and thoroughly diffused animating principle – is particularly telling, for there are some texts which suggest the presence of precisely *these* doctrines in Leibniz’s late Parisian philosophy.²⁴²

In any case, the fusion of the logical and the real underwriting the argument in *Quod Ens Perfectissimus sit Possibile* is also apparent in other passages from the same period. Consider these:

There is the same variety in any kind of world, and this is nothing other than the same essence related in various ways, as if you were to look at the same town from various places; or, if you relate the essence of the number 6 to the number 3, it will be 3×2 or $3 + 3$, but if you relate it to the number 4, it will be $6/4 = 3/2$, or $6 = 4 \times 3/2$. So it is not surprising that different things are produced. (*De Formis Simplicibus*, April 1676; A VI, 3: 523/DSR 83)

It seems to me that the origin of things from God is of the same kind as the origin of properties of an essence; just as $6 = 1 + 1 + 1 + 1 + 1 + 1$, therefore $6 = 3 + 3$, $= 3 \times 2$, $= 4 + 2$, etc.. (*De Origine Rerum Ex Formis*, April 1676; A VI, 3: 518/DSR 77)

²⁴¹ See Aristotle, *Met.* B, 4, 1001a29–b1 and *Met.* N, 2, 1089a1–6.

²⁴² For the Averroistic view of a unique active intellect, see A VI, 3: 520–1 (April [?], 1676). For the World Soul doctrine, see A VI, 3: 474 (February, 1676) (cf., though, A VI, 3: 521). Both God’s diffusion through everything and the uniqueness of the active intellect appear to have been endorsed by Leibniz in his earlier *De Transsubstantiatione* (1668 [?]), though, unfortunately, the relevant portion of the text is at many points illegible. See A VI, 1: 511. For some comments on Leibniz’s early Averroism, see Wilson (1999). Against her, see Blank (2002). In suggesting that the early Leibniz (in the specified years) endorsed the World Soul doctrine I follow Kulstad (2005: 21) and Duarte (2012).

Here Leibniz explains the manner in which things proceed from God – or, more precisely, from forms or the attributes of God²⁴³ – by appealing to the relation between the essence of a number and its properties. Again, Mercer is reluctant to read this explanation as committing Leibniz to substance monism. As a matter of fact, she thinks that Leibniz’s position in these passages is evidence *against* such a commitment. Commenting on the second text, she writes: ‘While the essence and being of the Supreme Being emanate to its products, each creature...is *not* identical to it. Leibniz was not a pantheist during the period 1675–1677’ (2000: 93; emphasis hers). I think this distorts the issue at hand. For there is no argument about the fact that in these texts Leibniz is trying to provide an explanation of the origin of things that can preserve *some* distinction between them on the one hand, and the source from which they proceed on the other. Consequently, Mercer is right to suggest that Leibniz does not believe that God and the entities he emanates are *identical*. As seen in section 2, in fact, there is a text from this period in which Leibniz is explicit about this: God is not ‘the *same* (*idem*) as...nature, the world’ (A VI, 3: 474/DSR 27). Had he not believed this, he would have been bound to embrace necessitarianism, which he never did. Nor does BCT commit Leibniz to the identity between God and things: recall once again the python, which emanates its being to the hammock without being identical to it. What is arguable, rather, as Kulstad (2005) rightly argues, is whether the specific *kind of distinction* that Leibniz can get on the basis of the numerical examples presented in the quoted passages is enough to block pantheism or monism. And as far as this question goes, I think that the answer is ‘no’. For, being modelled after relations of commonality of logical part and combinatorial patterns such as those involved in the numerical examples, the distinction between God and things can hardly go beyond a merely modal one: things do not differ *as substances* – i.e. *radicaliter* or *realiter* – but as ‘the same essence (*eadem essentia*) related in various ways’. There is variety or distinction here, yet not variety or distinction of *substances*. And this is sufficient for substance monism to follow. To my mind, this explains the otherwise unaccountable fact that Leibniz does not resort to the principle of identity of indiscernibles, to which he was fully committed in 1676, in the context of the

²⁴³ Note the titles of the articles from which the two quoted passages come (*On simple forms* and *The origin of things from forms*). ‘Form’ and ‘divine attribute’ are (in this context) equivalent expressions. This is also clear from the title of another article (from which I have already quoted) of the same period, namely, *De Formis Seu Attributis Dei* (April 1676). See A VI, 3: 513.

monistic passages of that year: the qualitative discernibility that obtains between God and things even if BCT is true is not sufficient to refute substance monism because substance monism does not require identity.²⁴⁴ As Leibniz puts it in *De Veritatibus, de Deo, de Mente, de Universo* of April 1676 (on which more later), God and things do indeed differ, though just ‘as the number 3 is different from all its parts...[God] is everything. Creatures are some things’ (A VI, 3: 512/DSR 67).

5. *A proposed solution: perception as a way out of monism*

5.1. *Preliminaries*

So BCT did, it has turned out, form part of Leibniz’s philosophical theology at least during a brief time span. Further, I have argued that this was a consequence of Leibniz’s Platonic construal of the absolute as definitionally prior to the limited, in conjunction with his endorsement of the Rationalist Assumption.

But Leibniz’s embrace of BCT is not of course a permanent outcome in his thought. He certainly closed the door to monism on 4 February 1678²⁴⁵, probably on the occasion of his reading of Spinoza’s *Opera Posthuma*.²⁴⁶ In a letter to Henry Justel written on that day, he says he has encountered ‘a great deal of beautiful thoughts’ in the *Ethics*, but also ‘paradoxes’ that he finds ‘neither true nor plausible’. One of these paradoxes is that ‘there is only one substance, namely God’ and that ‘creatures are modes or accidents of God’ (A II, 1: 592–3).²⁴⁷ Something must have changed. But quite what?

There is a variety of ways one might wish to proceed.

One possible strategy could be to argue that the Platonic Claim is not a permanent doctrine in Leibniz’s thought. Alternatively, the same strategy could be adopted with respect to the Rationalist Assumption. A third possibility could, of course, be to adopt this

²⁴⁴ For Leibniz’s full endorsement of the identity of indiscernibles in 1676, see A VI, 3: 490–1 and Rodriguez-Pereyra’s comments (2015: 42 ff.). Mercer agrees that Leibniz is committed to this principle in 1676. See Mercer (2000: 94)

²⁴⁵ I shall argue, however, that this event may have occurred earlier, particularly in April 1677.

²⁴⁶ Spinoza’s posthumous works, including the *Ethics*, were collected by an editing team shortly after Spinoza’s death on February 21, 1677. There is evidence that on January 15, 1678, a copy of the *Ethics* was sent to Leibniz by H. Schuller (A III, 2: 314). The copy must have reached Leibniz by February 4, 1678. See A II, 1: 592–3.

²⁴⁷ See also Leibniz’s 14 February 1678 letter to Placcius (A II, 1: 394).

strategy with respect to both the Platonic Claim and the Rationalist Assumption. The first and second strategies, however, would by themselves be sufficient to block BCT, for BCT does not follow from the Rationalist Assumption or the Platonic Claim but only from their conjunction.

Each of these strategies has something to say in its favour, but it is not my intention to assess either their virtues or drawbacks in detail here. Instead, I would like to pursue a different one. In particular, I would like to propose an interpretation which can keep both the Platonic Claim and the Rationalist Assumption. Motivation for this can be found in the fact that, even if one were to admit that a case can perhaps be made for the strategies just mentioned, a good case can also be made for the view that both the Platonic Claim and the Rationalist Assumption are fairly stable doctrines in Leibniz's thought. Thus, we have seen above that support for the Rationalist Assumption can be found in writings from the late 1670s, the mid-1680s, the late 1680s, and the late 1690s. With respect to the Platonic Claim, the five propositions listed towards the beginning of section 3 come from writings from the late 1690s and early 1700s. This being the case, I think that an interpretation which can both block the inference from the Platonic Claim to BCT and accommodate the Rationalist Assumption would, at the very least, be desirable and interesting. Such an interpretation is what I will try to articulate in this last section.

5.2. The Perception-Constitution Claim: substances have perceptions and are the perceptions they have

What we are looking for, I submit, is accomplished if perception constitutes the very being of the substances that God emanates. Call this the 'Perception-Constitution Claim'. There are two components to this claim, neither of which is of itself sufficient for the view I want to put forward.

The first component is that God's emanations are perceptually-equipped entities: substances are endowed with, or *have*, perception. Call this the 'Perception Claim'. What makes the Perception Claim relevant to our present topic is that it opens up the possibility of what I will describe as the intentional reduplication of God. The notion of intentional reduplication I have in mind is traditional and can be captured by considering the following case: a mind which perceives a wooden chair does not itself become the wooden chair

while it perceives it – it does not itself consist of wood.²⁴⁸ And yet, the perceived wooden chair does refer to the actual wooden chair. To use the terminology I have already employed in connection with Leibnizian expression, there is a structure-preserving mapping from the perceived chair to the properties of the actual chair.²⁴⁹ Or, we will now say, the chair is intentionally – or ‘objectively’, not ‘formally’, in Cartesian terminology – reduplicated in the perceiving mind.

This explanation of the idea of intentional reduplication by reference to a perceiving mind might suggest to some that the notion of perception predicated in the Perception Claim, and thereby the Perception Claim itself, is too narrow. The worry here, to wit, would be that the Perception Claim applies *only* to minds or mind-like substances. With respect to this worry, the first thing to say is that, as will be made clear below, the strategy I am developing does in fact rely on a construal of Leibnizian substances as mind-like substances (though the strategy, as I would like it to be seen, can also be regarded as a case *for* such a construal rather than as relying on it). Even putting this anticipation aside, however, I think the worry is misplaced when it comes to the Perception Claim. For the relevant characteristics of intentional reduplication I mean to capture through the case of the perceiving mind do not only apply to minds or mind-like entities. Indeed, intentional reduplication is wide enough to apply to items which not only are not minds or mind-like substances but not even substances. Consider these cases: the model of a machine expresses the machine itself, speech expresses thoughts and truths, an algebraic equation expresses a circle.²⁵⁰ As in the case of the perceiving mind and the wooden chair, in all these cases some disparity obtains between what expresses and what is expressed: the model of a machine needs not have (say) screws, thoughts and truths are soundless, an algebraic equation lacks circularity. But a certain commonality is preserved too: a structural analogy is so maintained between them as to render it possible to map one onto the other. In Leibniz’s words, ‘what is common to all these expressions is that we can pass from a consideration of the relations in the expression to a knowledge of the corresponding properties of the thing expressed’ (A VI, 4: 1370/L 207). Thus intentional reduplication can

²⁴⁸ For Leibniz, this holds true even for some material substitute of wood: ‘Traces impressed on the brain are therefore not ideas, for I take it as certain that the mind is something other than the brain or a more subtle part of the brain substance’ (A VI, 4: 1370). See also GP III: 68.

²⁴⁹ See chapter 1, section 3.4. Argumentation for treating expression as perception was also provided therein.

²⁵⁰ For these and more non-mentalistic examples of expression, see A VI, 4: 1370.

be applied to minds, mind-like substances, substances more generally, and even abstract objects such as algebraic equations.

The second component of the Perception-Constitution Claim is that the perceptions substances have constitute the very being of the substances that God emanates. Call this the ‘Constitution Claim’. A first approximation to what this claim means is provided by a short texts from Leibniz’s correspondence with Sophie:

Your Electoral Highness asks me what a simple substance is. I reply that its nature is to have perception. (LTS 346)

Sophie’s question here is about simple substances’ *being*. But Leibniz’s answer concerns something substances *have*: their being – their nature, what they are – is ‘to *have perception*’, he says. This suggests that perception is not merely something substances have: it is what makes them to be what they are. Put differently, substances *are* the perceptions they have. That is the thought expressed in the Constitution Claim.²⁵¹

But Leibniz’s remark to Sophie is indeed brief, so I need to strengthen my case that the quite strong thought expressed in the Constitution Claim is actually Leibniz’s. I begin with the following passage from § 14 of *NS*, which seems quite clear and strong to me (though, if you disagree, more passages are coming as we proceed):

[The] internal perceptions in the soul itself must arise from its own original constitution (*constitution originale*), that is to say, from its representative nature (*nature representative*) ..., which it has had since its creation and which constitutes its individual character (*fait caractere individuel*). (GP IV: 484/WF 18)

In this passage Leibniz is talking of the ‘soul’, but the context makes it clear that he has all substances in mind.²⁵² And what we find in it – or at least one thing we find in it – is the

²⁵¹ Something similar to my Constitution Claim has been recently defended by Jorati in her article ‘Leibniz’s Ontology of Force’ (2018). According to her, Leibnizian substances do not only ‘have’ force: they ‘*are* just force’. This is not exactly the same as the Constitution Claim, but I have argued in chapter 1 that perception is for Leibniz the nature of the force of substances. If this is correct, the view I am putting forward appears to get very close to Jorati’s (though perhaps she wouldn’t accept that perception is the nature of the force of substances).

²⁵² One sentence prior to the quoted passage Leibniz talks of God’s first creating ‘the soul, or (*ou*) any other real unity’ (GP IV: 484/WF 17). This clearly sets the framework for Leibniz’s ensuing remarks, which therefore are meant to hold for every real unity.

Constitution Claim. The individual character of a substance – its ontological complexion, what it is as an individual – is constituted by its representative nature and hence by its internal perceptions, which come to it through this originally constitutive representative nature.²⁵³

Without further qualifications, the Constitution Claim raises obvious difficulties in relation to Leibniz's intellectual development with respect to idealism. As I anticipated, here I shall operate on the assumption that idealism does not exclusively belong to Leibniz's later metaphysics. Note, however, that, as I am formulating it, this assumption remains non-committal as to whether Leibniz's earlier metaphysics must be regarded as *exclusively* idealistic: competing ontologies may have coexisted. If someone would like to use the argument I am developing to make a case for idealism in Leibniz's earlier metaphysics, I would not resist. But additional argumentation would have to be provided, and I will not provide it here. Be that as it may, a further statement of our Constitution Claim figures in a text from the mid-1680s. In a draft for his letter to Arnauld of 30 April 1687, Leibniz writes:

Our soul has some confused sentiment of the entire universe, and of the entire past, present, and future...and...its entire individual essence consists in nothing but this expression of the universe (*toute son essence individuelle ne consiste que dans cette expression de l'univers*). (A II, 2: 167)²⁵⁴

Leibniz's claim here is at least as strong as the one he was to make some seven years later in *NS* § 14. The expressions – that is, perceptions, given that they occur in a unity²⁵⁵ – predicated of a soul are identified with the *entire individual essence* of that soul: its entire individual essence is *nothing but* its expression of the universe. It follows from this that substances (or at least our soul) are the perceptions they have.

Essentially the same conclusion can, upon elaboration, be seen to surface in *DM* § 15, though now deployed so as to apply to all substances rather than to our soul:

²⁵³ As noted earlier, that substances have a 'representative nature' is repeated by Leibniz in other passages. See *Mon.* § 60: 'each monad is representative in nature' (*dont la nature étant representative*)' (GP VI: 617). See also A II, 2: 243: '...a substance, whose *being (estre)* is to be representative' (my emphasis). Lloyd Strickland translates the former passage as 'each monad's nature is to represent' (SM 26). Mason renders '*estre*' as 'nature' in his translation of the latter (LA 146).

²⁵⁴ Here the intentional object of the expression which the entire individual essence of the soul is said to consist in is the universe, not God. But see below.

²⁵⁵ See chapter 1, section 3.4.

The power (*vertu*) a particular substance has is to express well the glory of God, and it is *by doing this that it is less limited*. And whenever something exercises its efficacy or power [*sc.* its expression], that is, when it acts, it improves and extends itself (*change en mieux, et s'entend*). (A VI, 4: 1554/AG 48; my emphasis)

For simplicity's sake, let us put to one side the particular intentional object – 'the glory of God' – that this passage claims to be the object of the expressions of substances, which I think does not affect the point I am making.²⁵⁶ Here Leibniz begins by identifying the power of substances – their principle of action, as the second sentence of the passage implies – with their expressions. In chapter 1, section 3.4, I argued in detail for the view that this represents Leibniz's considered position as to the nature of substantial force. But then comes something new. Conspicuously, Leibniz draws a very strong connection, if not an equation²⁵⁷, between degree of expression and degree of perfection, that is, quantity of essence or reality: to be more or less perfect/real is a function of expression.²⁵⁸ And so, once again, we are brought to our Constitution Claim: the perceptions of substances constitute their very being and hence substances are the perceptions they have.

5.3. Perception and BCT

To be sure, much more could be said about the Perception-Constitution Claim, about its potential problems, additional virtues, not to mention the notion of ontological constitution that is integral to it. However, I think that the foregoing remarks provide us with a reasonable amount of evidence for seeing this claim as part of Leibniz's views on substances and their relation to perception. At the very least, it seems safe to say that it represents one plausible way of interpreting some key Leibnizian contentions about substances and their relation to perception. This being granted, let me now explain why the

²⁵⁶ We will come back to this soon.

²⁵⁷ Indeed, the sequel of the quoted lines suggests an equation: '...greater degree of perfection *or* more perfect expression (*plus grand degré de perfection ou à une expression plus parfait*)' (A VI, 4: 1554, 7–8; my emphasis).

²⁵⁸ Bolton puts this point well: 'Leibniz sometimes defines "perfection" as "quantity of essence", which would seem to be a function of the extent to which an essence expresses the infinite perfection of God' (2013: 187, n. 36). See also Rutherford (1995: 179–80). In *Mon.* § 49 (GP VI: 615), Leibniz says that the degree of perfection is a function of the degree of distinction of perception.

Perception-Constitution Claim can allow us to block BCT without having to renounce either the Platonic Claim or the Rationalist Assumption.

Consider a substance *a*. The implication of the Platonic Claim is that the concepts of God's absolute attributes are notionally presupposed by *a*'s concept – they appear in the definition of *a*. Now, we have seen that, given the Rationalist Assumption, this yields BCT: logical commonality entails ontological commonality. But now suppose the Perception-Constitution Claim is true. Under this supposition, BCT will not obtain because, in virtue of the Perception Claim, *a* is only a 'divine mirror' or (modified, imperfect) duplicate of God. That is, *a*'s perceptions have God's attributes as (more or less confused/distinct) intentional objects. Thus *a* does not formally but only objectively possess limited instances of the attributes of God. At the same time, the Platonic Claim continues to stand up, for the definition of *a* in terms of the concepts of divine attributes will continue to be a correct definition of *a*: the enumeration of all the requisites encoded in *a*'s concept will display more or less limited/pure versions of divine attributes. Similar considerations apply to the Rationalist Assumption. For, given the Constitution Claim, it continues to be true of *a* that its being perfectly matches, as that assumption demands, the information encoded in its concept even if the Platonic Claim is true and BCT false: *a*'s very being, its entire individual essence, *consists in its perceptions*, which in turn intentionally reduplicate the attributes of God.

A natural objection to this strategy might be this. As presented in section 2, BCT is a component of emanative causation, which, alongside imitation, is in turn part of Leibniz's general model of creaturely property derivation. But my strategy may appear to restrict that model to the imitation relation alone, leaving emanation aside. If so, I should better have taken a shorter route towards blocking BCT: emanation is not a component of Leibniz's view of the relation between God and his creation and hence there is no reason to be concerned about BCT.

This objection misconstrues the strategy I am adopting. For my strategy does not only include the idea of imitation – or, more particularly, the idea of intentional reduplication involved in the Perception Claim – but also the Constitution Claim, which asserts that perception is constitutive of the very being of those entities that God emanates. So my strategy does not rule out emanation as part of Leibniz's general model of property

derivation, but rather offers an interpretation of what the precise nature of the emanated content is: what God emanates are perceiving beings, beings which more or less distinctly represent God's ontological character. This connection between emanation and the representational nature of the emanated effects is borne out by Leibniz's position in *DM* § 14, where he expressly links the notion of continual production or emanation to the idea that what results from God's emanative act are entities which express the whole universe (A VI, 4: 1549,15–1550,5). It is also suggested by Leibniz's assertion, in *DM* § 28, that it is 'because of (*en vertu*) God's continual action (*action continuelle*)' that 'every effect expresses its cause' (A VI, 4: 1573; my emphasis). Continual action, which in § 14 is equated with emanation, is conceived of here as that which explains the fact that every effect expresses its cause and hence that every substance expresses God.

But if my strategy can resist this objection from the side of emanation, it might perhaps fall to the ground in the face of this other objection, coming now from the side of imitation. For, as a matter of fact – one could object – it is false that, for Leibniz, every substance expresses God: only rational souls do.²⁵⁹ As for non-rational ones, the intentional object of their perceptions is not God, but the universe.

This, I admit, is a real problem. Yet it is not decisive. It is true that there are many passages in which Leibniz says (or implies) that only rational substances express God, whereas non-rational substances would only express the universe.²⁶⁰ However, there are also many passages in which Leibniz says (or implies) that all substances express God *and* the universe.²⁶¹ Which of these sets of passages express Leibniz's considered position? While it is not my intention to adjudicate this complex issue here, I shall pick up Duncan's (2015) suggestion that Leibniz's claim that only rational substances express God is not meant to establish any divide between two kinds of intentional objects, one kind (God) corresponding to the perceptions of rational substances, the other (the universe) to the perceptions of non-rational ones. What Leibniz is doing, rather, is to underscore the *degree* of perfection of intelligent substances' perception of God. Somewhat paradoxically, support to this view is given by § 35 of *DM*, the very section of that work which, at first, one might take to support the opposite view. In its summary, Leibniz writes: 'That Minds (*Esprits*)

²⁵⁹ The transition from imitation to expression I have just made is authorised by *DM* § 28 (A VI, 4: 1573).

²⁶⁰ See e.g. A VI, 4: 1584, 1587; A VI, 4: 1624; A VI, 4: 2271; GP VI: 604.

²⁶¹ See e.g. A VI, 4: 1553; A VI, 4: 1555; A VI, 4: 1585; A VI, 4: 1646.

Express God Rather than the World, but That the Other Substances Express the World Rather Than God' (A VI, 4: 1584/AG 66). But then, in the body of the section, we find the following:

[C]ertainly minds are the most perfect beings and *best* express divinity. And since the whole nature, virtue, and function of substance is to express God and the universe..., there is no reason to doubt that the substances which express God with the knowledge of what they are doing, express him incomparably *better*. (A VI, 4: 1585/AG 66; my emphasis)

According to this passage, all substances perceive God and the universe, though rational substances 'best' (*le mieux*) and 'incomparably better' (*mieux sans comparaison*) perceive God. This is consistent with Leibniz's view, expressed elsewhere, that 'nature is fundamentally uniform, although there are differences of degree and different levels of perfections' (GP VI: 343/WF 221). Also, it is in keeping with the main insight governing Leibniz's argument in *DM* §§ 34–36, which is not intended to distinguish between two different *kinds* of substances (rational and non-rational substances) but rather to locate rational substances at the top of the graduated hierarchy in which the whole of created reality consists.²⁶² Finally, even if one were to admit that the 'proper' intentional object of non-rational substances' perceptions is the universe, this would not be to the exclusion of their perception of God. For, on Leibniz's view, the universe expressed by substances consists of 'phenomena of God (*phaenomena Dei*)' (GP II: 438). So, if substances express the universe, they also express God, who manifests himself in his creation.

Hitherto I have presented the Perception-Constitution Claim and explained how it can block BCT while preserving the Platonic Claim and the Rationalist Assumption. Also, I have tried to dispel two objections that could be made against my adoption of it as a strategy for liberating Leibniz from BCT. So far, however, my position has been presented in the form of a rather abstract hypothesis. In particular, no evidence has been offered to support the view that, as *I* think, *Leibniz* thought of perception as an effective way of escaping the monistic view into which he fell in 1675–1676. Is there any evidence pointing

²⁶² Indeed, this graduated hierarchy extends beyond the whole of *created* reality, reaching the whole of *reality* (God included): 'in the visible just as in the invisible', everything is alike, as Leibniz says elsewhere (GP III: 345).

in that direction? I think there is. The evidence, however, is only implicit. I conclude this section by exposing it.

Let us revert to the passage from *De Veritatibus, de Deo, de Mente, de Universo* quoted at the end of the previous section. God differs from things, though

[a] just as the number 3 is different from all its parts (*partibus*)...[God] is everything (*omnia*). Creatures are some things (*quaedam*). (A VI, 3: 512/DSR 67)

This, recall, was written in April 1676. But now consider this, written to Eckard exactly one year later, on April 28, 1677:

[b] [I]t seems impossible for there to be a Being that is everything (*omnia*); for it could be said of such a being that it is you and it is me, which I think you will not admit. (A II, 1: 323)²⁶³

I think that, in a nutshell, [b] encapsulates the idea of perception as a way of escaping substance monism. Before explaining why, bear in mind that Leibniz's most systematic presentation of his notion of representation, namely *Quid sit Idea*, was written in the autumn of 1677, and that there he expressly endorses the view that a relation of representation holds between things and God.²⁶⁴

We may begin by noting that texts [a] and [b] differ from one another in the obvious sense that the latter questions what the former affirms: 'God is everything', says [a]; that 'seems impossible', says [b]. But they also differ in a more interesting, less obvious sense; they differ, namely, as to the *conceptions of monism* that each of them presupposes. Text [a] presupposes a conception of monism according to which God relates to things as a whole to its parts. Parkinson puts it clearly: 'Leibniz seems to be saying here that God is all things, and that creatures – i.e. what are normally called God's creations – are parts of God' (1978: 88). But this cannot be the case in [b]. Consider Leibniz's argument against the view that there is a Being who is everything in that text. If there is a Being who is everything, Leibniz argues, then such a being would be me and would be you, which is unacceptable. This argument would be ineffective if its target were a part-whole type of monism such as

²⁶³ I borrow the translation of this passage from Adams (1994: 130–1).

²⁶⁴ See A VI, 4: 1371.

the one articulated in [a].²⁶⁵ For if God – the ‘Being’ Leibniz is referring to – is a whole and finite beings – you and I – relate to him as his parts, then the proposition that there is a Being who is everything does not entail that you and I are the *same*, as Leibniz’s argument is meant to conclude: it only entails that you and I are *parts of the same whole*. And we would not of course charge Leibniz with a *non sequitur* of this type. So, we must conclude that the conception of monism in [b] is not the part-whole conception of monism in [a]. More specifically, we must conclude that the type of monism presupposed by [b] is such that *each finite entity is somehow the whole*.²⁶⁶

And this conclusion is very important. For, seen in connection with it, the hypothesis that perception is the key notion that allows Leibniz to block substance monism is given an unexpected force.

Let us reconsider the case of the perceiving mind and the wooden chair. I mentioned earlier that the perceiving mind does not become the wooden chair itself while it perceives it – the chair is made out of wood, but there is no wood in the mind. But the reason for this is not that the mind perceives *this* or *that part* of the chair. The mind perceives the chair as a *whole*. If this were not so, the structural analogy between the intentionally possessed chair and the actual chair would break down, and hence a requirement of Leibnizian representation would not be met: there would be no ‘constant and regular relation’ between them, no possibility of mapping one onto the other. So the conclusion at which we arrive is that the perceiving mind must somehow refer to the whole chair, though without being the chair itself. Put another way, some sort of, as it were, ‘partial’ representation which is not representation ‘of parts’ must obtain between them.

This is exactly what we find in Leibniz’s canonical statements about the sort of relation holding between perceiving monads and their intentional objects. A passage from *Mon.* § 60 falls squarely within the described scenario:

²⁶⁵ As rightly noted by Kulstad (2005: 23–4).

²⁶⁶ The transition from monism-[a] to monism-[b] might be read as a transition to a version of monism in which the God/things relationship is identity, which, as I have argued, is not the version we find in Leibniz’s monistic statements of 1675–1676, or the one entailed by BCT. This reading would not be quite right, however, for the identity between finite things and God in monism-[b] is taken distributively – *each* thing is the whole – while the non-identity in monism-[a] and the other monistic papers of 1675–1676 ranges over finite things taken *collectively* – ‘God is not the same as...the world’. One could perhaps object that the distributive identity of a finite being with God in monism-[b] entails their collective identity, but that is not logically necessary.

[S]ince the nature of the monad is representative, nothing can limit it to represent *only a part of things* (*partie des choses*)...Monads all go confusedly to infinity, to the *whole* (*tout*); but they are limited and differentiated by the degrees of their perceptions. (GP VI: 617/AG 221; my emphasis)

Closer to our time period, a similar view is found in *Quid sit Idea*, where Leibniz contends that ‘every entire effect represents the *whole* cause (*causam plenam*)...and so, too, in a way the world itself represents God’ (A VI, 4: 1371; my emphasis). Intentional reduplication seems then to be exactly what is needed if the view Leibniz aims to escape is the one exemplified by the conception of monism in [b]. By this I do not mean that intentional reduplication can block monism only if the view Leibniz aims to escape is the one exemplified by [b]. Rather, what I am highlighting is how well all the pieces fit together if it is true that, as I am proposing, Leibniz thought of perception as a way of escaping monism. Sometime between November 1676 and April 1677 Leibniz decided against monism. In paving his path towards pluralism, he tried, naturally enough, different formulations of the view he was aiming to escape, one of which is monism-[b] of April 1677. And the notion of expression, on which he systematically reflected in the autumn of that year, provided him with a theoretical tool which suited his purpose neatly. If substances are representative in nature, then they can somehow – i.e. representatively – refer to the whole. Consequently, they can somehow – i.e. intentionally – possess all the properties of the whole. Yet, this does not entail that substances are the whole itself: just as a mind’s perception of a chair as a whole does not entail that that mind is formally that chair, so too substances’ perception of God as a whole does not entail that they are formally God.

But there is more. For this explanation of Leibniz’s departure from monism via the notion of perception also fits well with Leibniz’s Platonic conception of creation as God’s instantiating intensionally-bounded correlates of his absolute attributes, a conception which is particularly visible in his writings from the late Parisian years.²⁶⁷ According to that conception, in fact, finitude is not ascribed to things because they possess this but not that absolute attribute – e.g. omniscience but not omnipotence – rather than possessing all absolute attributes – omniscience, omnipotence, etc. For which absolute attribute could a

²⁶⁷ See A VI, 3: 391 ff.; A VI, 3: 520. For more references, see Adams (1994: 114 ff.).

finite being possess? On that conception, rather, things are said to be finite because they instantiate limited degrees of *all* those attributes that are found absolutely in God, much in the way that a shade of purple possesses purpleness as a whole – not blueness rather than redness, or the reverse – while failing to be primordial, pure purple: ‘the perfections of God are those of our souls, but he possesses them without limits’, as Leibniz will later put it in the *Theodicy* (GP VI: 27/H 51). And, in Leibniz’s Platonic ontology, this uniformity applies throughout, ‘in the invisible just as in the visible’ (GP III: 345/WF 222): ‘all the time and everywhere everything is the same..., although there are differences of degree’ (GP III: 343/WF 221). Things ‘all go confusedly to infinity, to the whole’.

Conclusion

In a letter to Bourguet of December 1714, Leibniz famously declared that Spinoza ‘would be right if there were no monads’ (GP III: 576). Despite this and other overtly anti-monistic statements²⁶⁸, scholars have sometimes complained about the apparent absence of solid theoretical foundations for them in Leibniz’s philosophy. With what is surely a sign of disappointment, Jan Cover and John O’Leary-Hawthorne write in the last page of their already classic book: ‘[T]here does not seem to be any convincing a priori argument of a theoretical sort entailing a plurality of substances. What Leibniz does have, of course, are vague moral considerations on the one hand and what he takes to be the contents of divine relation on the other’ (1999: 290). Other philosophers have gone even further, pointing out that, Leibniz’s intentions notwithstanding, his pre-established harmony is in effect one of the closest allies of Spinoza’s monism. If this is so, we may well conclude that Leibniz not only failed to build his pluralistic ontology upon a satisfactory theoretical basis: he actually contributed to the promotion of a monistic ontology by espousing a doctrine which can be used to fuel it.

One of my aims in this chapter has been to show that these sorts of complaint are ultimately unjustified. The gloss we should put on Leibniz’s declaration to Bourguet, and thereby the response we should give to the first sort of complaint, is, I have argued, this: Spinoza ‘would be right if there were no monads’, because ‘monads are *representative in*

²⁶⁸ See e.g. GP IV: 508–9 and Robinet 421.

nature' (GP VI: 617; my emphasis). That is, the purportedly missing theoretical basis upon which pluralism rests is perception, and more particularly the view that perception constitutes the very being of substances. This serves also as a response to the second type of complaint, for, as I have argued in chapter 1, perception is not an extra concomitant of, but actually integral to, the theory of pre-established harmony. Therefore, the pre-established harmony can hardly be used to lend support to Spinoza's one-substance metaphysics. Quite the opposite, it incorporates the very notion which prohibits such a metaphysics as one of its indispensable components.

The second goal of this chapter has been to achieve an explanation of the grounds of perception and pluralism – (C6) and (C7) in our formulation of pre-established harmony. The foregoing summarises my view on pluralism's grounds. As for perception, I have offered an explanation of its origin which is recognisably distinct from, and – I have also suggested – preferable to, the logicist explanation from conceptual completeness: perception derives from substances' relation to God, in whom there is infinite perception. As I have developed this explanation, perception, the theological model on which it rests, and Leibniz's pluralistic metaphysics are all parts of a unified network of complementary doctrines. The theological model of property derivation (formed by the imitation relation, emanative causation and the logical priority of the absolute) which sets the general framework for Leibniz's view that perception is a property of every substance, poses, upon elaboration, a *prima facie* problem for his view that there is actually more than one substance. However, the solution to this problem lies precisely in the property of perception, whose ascription to every substance is in turn explained by that model.

And yet, as interesting as this explanation may be, it does not leave the logicist interpreter without a rejoinder. Granted, the theological derivation of perception may perhaps provide us with an adequate account of the origin of substances' perception. True, this account may perhaps be preferable to the logicist account. But none of this strictly prohibits that substances' possession of perception *can* be seen, as some of Leibniz's writings indeed suggest, as a consequence of their having complete concepts. And I have not directly argued that it cannot. So, while my findings in this chapter do give us some good reason for doubting the adequacy of the logicist reading of pre-established harmony, there still remains further work to be done. We shall now proceed to do it.

CHAPTER 4

From Complete Concepts to Natures via Miracles: Towards a Restrictive Interpretation of Leibnizian Spontaneity

1. Introduction

If we were asked to produce a single sentence to stand as the most distinctive component of Leibniz's pre-established harmony, it would probably be something like this:

- (1) Necessarily, for any (non-initial) state, P, for any substance, *a*, if *a* has P, then P has *a*'s own intrinsic powers as its real cause.

This is Leibniz's thesis of spontaneity – (C4) in my formulation of pre-established harmony – the thesis which, in Stuart Brown's words, 'is really original in Leibniz and [without which] the doctrine of pre-established harmony would have been commonplace' (1984: 158).²⁶⁹ Of course, Leibniz took pains to explain that a *de re* formulation of (1) does not hold: the *states* of substances are not necessary but only 'certain' or 'assured' on account of God's moral perfection. But he believed that a substance's states must be posited in virtue of grounds which are internal to that substance, even if the states themselves are not necessary.²⁷⁰

In this chapter, the last of a series of three, we continue our inquiry into the grounds of pre-established harmony by concentrating on the spontaneity thesis. As has been the case in the two previous chapters, our leading question is about its provenance – where does it derive from.

According to what I have called the logicist reading of the theory of pre-established harmony, Leibniz extracts that theory from his complete-concept theory of substance and

²⁶⁹ Leibniz gives in-context definitions of spontaneity along (1)'s lines in many places. See e.g. A VI, 4: 1581; A VI, 4: 1575; A II, 2: 53; GP IV: 484, GP IV: 518, GP VI: 138, GP VI: 296, NE 210.

²⁷⁰ A passage from the Des Bosses correspondence nicely captures the contrast between these two theses: 'To be sure, I maintain that a power of determining oneself without any cause, or without any source of determination, implies a contradiction, as does a relation without a foundation. But the metaphysical necessity of every effect does not follow from this. For it is enough that the cause or reason is not metaphysically necessitating, even though it is metaphysically necessary that there be some such cause' (GP II: 420/LR 201). For substances' states as 'certain' (*certaines*), see A II, 2: 49, 74. As 'assured' (*assurés*), see Gr. 362. See also A II, 2: 80; A VI, 4: 1546; GP VII: 109.

thus ultimately from his conception of truth as containment of the predicate in the subject. I have argued in chapter 3 that at least with respect to one key component of pre-established harmony this reading is questionable: when it comes to the nature of substances' intrinsic power as representational power, Leibniz shifts the focus from his logical doctrines to his Platonic theology. In this chapter, I aim to reinforce and extend my case against the logicist reading of pre-established harmony by arguing that it fails to provide us with a satisfactory account of the spontaneity thesis in the first place. That is, even before entering into questions concerning the specific nature of substances' spontaneous powers, the logicist reading fails to explain Leibnizian spontaneity itself.

To show this, I shall concentrate on a specific case which renders the logicist reading particularly problematic: that of miracles. What makes this case relevant to spontaneity and its bearing on the logicist reading is captured by the following two-step argument: the logicist construal of the spontaneity thesis is inconsistent with the possibility of miracles. But Leibniz wants to preserve the possibility of miracles. Hence, that construal is not right.²⁷¹ Besides arguing for this negative claim, however, I shall also argue for the positive claim that the locus of a substance's spontaneity must be placed in its complete *nature*, which is extensionally different from its complete concept: all that is included in a substance's complete nature is included in its complete concept, though not all that is included in its complete concept is included in its complete nature. Particularly, miracles are included in substances' complete concepts but not in their complete natures. Once this is built into Leibniz's views on spontaneity, the spontaneity thesis in (1) takes the more concrete form of the thesis that

- (1*) necessarily, for any (non-initial) *natural* or non-miraculous state, P, for any substance, *a*, if *a* has P, then P has *a*'s own intrinsic powers as its real cause.

Since, as I have just indicated, not all the true properties of a substance are, for Leibniz, natural properties – there are properties in the complete concept which are not in the

²⁷¹ It could of course be right, for Leibniz's views on spontaneity might in effect run counter to his willingness to accommodate miracles within his system. However, I shall take as a starting hypothesis that this is not so. Part of my task in this chapter can thus be seen as that of confirming this hypothesis by arguing that the logicist reading cannot accommodate miracles and, therefore, that it is not Leibniz's considered view on the grounds of the spontaneity thesis.

complete nature – (1*) entails that there are properties, namely miraculous properties or events, truly predicable of substances which are nonetheless *not* spontaneous. For this reason, I shall call (1*) the thesis of ‘Limited Spontaneity’. In sum, then, my aim in what follows will be to argue both against the logicist reading of Leibnizian spontaneity and for Limited Spontaneity as the correct interpretation of it.

I divide the chapter into four sections. The core of the argument running through them is as follows. Sections 2 and 3 concentrate on the negative thesis that the logicist derivation of spontaneity is not Leibniz’s considered view of the grounds of substances’ spontaneity. Thus, in section 2, I begin by offering an argument for the claim that, if there are miracles, then the logicist view cannot be right. Section 3 brings the argument into closer focus. It shows, first, that Leibniz wants to accommodate miracles within his system of complete beings and all-encompassing order (3.2). Next, drawing on *DM* § 16, we focus on Leibniz’s strategy for preserving the possibility of miracles within such a system. As we shall see, this strategy relies on a distinction between concept, essence and general law of order on the one hand, and nature and law of nature on the other (3.3 and 3.4). I shall argue that this distinction, or more particularly that between essence and nature, is not a distinction between individual essence and abstract (or specific) essence, in which case miracles would be metaphysically impossible. However, while this will allow me to remove one obstacle for the possibility of miracles, I will conclude that it is not sufficient to establish the positive thesis of Limited Spontaneity (3.5). Section 4 aims to establish that thesis. To do this, I demonstrate the two claims that (i) spontaneity is, for Leibniz, intrinsic causal determination (4.1), and that (ii) nature is – for Leibniz, against the occasionalists and the Newtonians – intrinsically determining cause (4.2). Since miracles are supernatural or beyond-nature events, (i) and (ii) entail that miracles are beyond spontaneity, which is what Limited Spontaneity asserts. Section 5 addresses some objections. Among others, I consider the objection that there are in fact a number of important passages in which Leibniz presents spontaneity as a logical consequence of conceptual completeness. However, I argue that, set in their proper context, these passages turn out to pose no serious challenge to Limited Spontaneity. Also, contrary to the view of some scholars, I explain that the relocation of spontaneity to the restricted domain of natural predicates demanded

by Limited Spontaneity entails no restriction on the universal scope of pre-established harmony.

One further preliminary remark is in order before moving on. I am not the first to think that what I have called Limited Spontaneity is the correct version of Leibnizian spontaneity. In fact, many scholars employ the qualifier ‘natural’ or ‘non-miraculous’ in their formulations of the spontaneity thesis, which means they endorse, or should endorse, Limited Spontaneity.²⁷² However, these scholars neither develop nor mention the main implications that Limited Spontaneity bear, namely that there are true yet non-spontaneous predicates in substances, and hence that spontaneity cannot be a mere corollary of the complete-concept theory of substance and the predicate-containment conception of truth on which that theory rests. One notable exception to this is Kulstad (1993b), who notes and pays attention to these implications: I owe much of the initial impetus for the present chapter to reading his article. But then, again, the argument I will be advancing differs from Kulstad’s in important respects, as will emerge. So much for originality.

2. The negative case from miracles: against the logicist view

According to the two-step argument presented earlier, the logicist construal of spontaneity fails because Leibniz wants to preserve the possibility of miracles, which cannot be done if that construal holds true. Let me put my cards on the table and explain why I think this is so. I shall present my argument in a rather abstract form, deferring discussion of the relevant premises until subsequent sections.

²⁷² They should, I say, because they believe, or should believe, that there are true miracles for Leibniz – otherwise the qualifier ‘natural’ or ‘non-miraculous’ in their formulations of spontaneity would be pointless – in which case Leibnizian spontaneity holds for *some* of substances’ true predicates (namely natural ones), that is, it is limited or restricted. Of course, other scholars need not concern themselves with limited versus universal versions of Leibnizian spontaneity, because they do not believe that miracles are possible within Leibniz’s system: all of a substance’s properties are spontaneous and hence there are no genuine miracles for Leibniz. Scholars on this side include Brown (1995), Stevenson (1997), and Cox (2002). In favour of the possibility of miracles are Sleight (1990), Kulstad (1993b), and Rutherford (1995: 241). To them I would add Lodge (1998: 305), Lee (2004: 226), and Jorati (2015b: 393), all of whom formulate Leibniz’s doctrine of spontaneity as holding for non-miraculous states only. A very balanced position which I hesitate to locate on any of these sides is developed by Adams (1994: 81–102). If I were forced to make a decision, however, I would say Adams leans towards the view that miracles – or anyhow most of them – are impossible in Leibniz’s system. See pp. 178–9.

For ease of exposition, let us take as given the premise that, to Leibniz's mind, miracles are possible, motivation for which will be given below. Now consider the following propositions:

- (2) A substance's complete concept includes every predicate, whether natural or miraculous, ascribable to that substance with truth.
- (3) An event is spontaneous if and only if it originates internally, involving no external influence.
- (4) The occurrence of a miracle requires external influence.

In the course of the next sections, we shall see that propositions (2)–(4) are all true for Leibniz. Yet, put together, I want to propose, they reveal that the logicist view is incompatible with miracles. The possibility of miracles being accepted, it follows from this that the logicist view cannot be true.

For suppose that view is true. According to it, the spontaneity thesis is simply a corollary of, or derives solely from, substances' property of conceptual completeness (note and bear in mind the qualifiers 'simply' and 'solely': they play their part, as will be made clear). Now, according to (2), the property of conceptual completeness is such that *all* of a substance's true predicates are included in its complete concept, no exception being made for miraculous predicates or events. But if this is the case, and if the logicist view of spontaneity is true, then no exception will be made for the case of miraculous events with respect to the spontaneity thesis either. In other words, the derivation of spontaneity from conceptual completeness entails that spontaneity and conceptual completeness apply to co-extensive domains: *every* predicate or event. But this contradicts (3) and (4). For, if (3) and (4) are true, then miracles are outside the domain of application of the spontaneity thesis: they are *not* spontaneous. Hence, the logicist view of spontaneity is incompatible with miracles.

There are two points about this argument which call for immediate clarification. The first can be presented in the form of an objection.

Let us revert to my argument's target, the logicist view. I have given it a specific formulation. On that formulation, the logicist view involves two claims, namely (i) that conceptual completeness is the source wherefrom the spontaneity thesis derives, and (ii) that conceptual completeness is the *only* source wherefrom that thesis derives. The second claim is important, for the co-extensiveness of the application domains of substances' spontaneous operations and their complete concepts would not obtain if nothing more than the derivation of the former from the latter were asserted: a particular proposition *p* can of course derive from a universal proposition *q*. So, one might suspect, the formulation I have given to my target is an *ad hoc* formulation, one especially concocted to serve the purpose of rebutting the logicist derivation of spontaneity.

Here I should begin by acknowledging that, in fact, it is true that part of the force of my argument relies on the specific formulation I have given to the logicist position. But the formulation does not seem *ad hoc* to me. Take Couturat, for instance, whom we have already introduced in connection with logicist construals of Leibniz's metaphysics in general. Particularly, consider the way in which Couturat formulates what he designates as the 'essential conclusion' of his work: 'Leibniz's metaphysics rests *solely* on the principles of his logic and proceeds *entirely* from them' (1901: ii; my emphasis). And while Couturat does not *verbatim* mention spontaneity in this context, he does mention the theory of pre-established harmony as a whole, the most distinctive component of which is, as we have seen, the spontaneity thesis (1901: iii). Indeed, Couturat goes so far as to contend that Leibniz's *Monadology* in its entirety flows from Leibniz's logical principles. As one would expect, the same position is found in Russell's *Critical Exposition of the Philosophy of Leibniz*.²⁷³ These are clearly reductionist views. That is, they do not only identify logic as a source from which Leibniz's metaphysical propositions derive: they claim that source to be fully sufficient for the explanation of all the features of Leibniz's metaphysics. On the logicist view, then, any possibility for metaphysical doctrines (spontaneity, in our case) to be qualified (restricted in its scope, in our case) in light of commitments of a non-logical origin (the possibility of miracles, in our case) is *a fortiori* precluded.

²⁷³ See especially Russell's Preface to the second edition of his *Critical Exposition*, where he expressly lines up with Couturat's account. In turn, Couturat himself refers to the first edition of Russell's book (1900) as one which arrives at the very same conclusion as his.

The second point about my argument that needs to be clarified concerns its scope. Above all, note that, in advancing it, I am not concerning myself with the question of whether the *idea* of conceptual completeness is or is not sufficient to account for all that is relevant to the *idea* of spontaneity. An affirmative answer to this question is, I take it, part of what logicist construals of spontaneity should be able to deliver, and, indeed, scholars who have opposed such construals usually attack them from precisely this flank.²⁷⁴ As these scholars see things, the failure of the logicist view springs from an *intensional* problem: there are descriptions associated with substances when understood as spontaneous principles of action – ‘dynamical’, ‘sequential’, ‘changeable’, ‘temporal’, ‘successive’, and so on – which are not associated with them when seen from the perspective of the model of complete concepts – a fundamentally ‘static’ model expressing the way in which substances find themselves already in the atemporal ‘region of ideas’. Therefore, they conclude, spontaneity cannot be derived from the complete-concept theory.²⁷⁵ In my opinion, the success of this approach largely depends on how far one is willing to push the *prima facie* intensional disparity between the ‘dynamical’ and ‘static’ accounts of substance. Compatibilist versions of it see these accounts as continuous and complementary, and I have nothing to say against them.²⁷⁶ Indeed, the argument I have offered can be seen to reinforce them, for, if spontaneity and conceptual completeness differ extensionally, they will also differ intensionally – both with respect to Fregean *Bedeutung* and *Sinn*, as we may put it. Other versions of the approach claim spontaneity and conceptual completeness to yield two *inconsistent* accounts of substance: this I think unpersuasive.²⁷⁷ In any case, the important point to be emphasised here is that the argument I have produced is intended to

²⁷⁴ Two quite different versions of this approach have been adopted by Rutherford (1995: 148 ff.) and, as I read her, Wilson (1989). The intentional irreducibility of spontaneity to conceptual completeness is also implied by Jolley (2005: 126) and Sleight (1990: 132, 90–1).

²⁷⁵ I borrow the ‘dynamical/static’ terminology from Rutherford (1995: 148, 152).

²⁷⁶ Here the best example is, in my judgement, Rutherford (1995: 138–54). Thus, he writes at one point that ‘the complete concept theory cannot account for the fact that substance is for Leibniz...a principle of action’ (1995: 138), but then adds that ‘the complete concept theory is designed to complement the traditional conception of substance as a principle of action’ (1995: 139).

²⁷⁷ The incompatibilist version of the intensional approach is probably best exemplified by the position of Wilson (1986). Thus, for instance, she writes that ‘force does not play any definite metaphysical role in the *Discourse*...The *Discourse* looks at the world *sub specie aeternitatis*, and the conception of the individual is, as a result, anything but dynamical’ (1986: 190). For some critical comments, see Rutherford (1995: 166, n. 14). Beyond Leibniz scholarship, another case in point is Kant (in some writings). See e.g. Prop. XII (‘Principle of Succession’) of his 1755 *Nova Dilucidatio*, where he defends the view that substances are either complete (include all their states) *or* undergo change (Ak I: 410, 18–20). See also Ak I: 410, 30–5. For more details, see Robert (2011).

have no explicit bearing on the intensional approach, whatever its version. What I am offering, in fact, is a different – and yet supplementary, as I would like it to be seen – approach to the relation between spontaneity and complete concepts, one whose chief methodological feature consists precisely in shifting the focus from the intensional concern that motivates traditional attempts at rebutting logicist construals of spontaneity to the issue of the extension of substances’ concepts and of their spontaneous operations as specified by the complete-concept theory and the spontaneity thesis, respectively.

3. Complete concept, essence, (laws of) nature: the possibility of miracles

3.1. Preliminaries

The argument I have presented in the previous section is admittedly abstract. Perhaps most notoriously, no support has been given for its premises. Thus, I have only assumed that miracles are possible for Leibniz. Nor have I explained *how* miracles are supposed to be possible, assuming that they are. The conception of spontaneity in (3) has also been merely asserted, offering no textual evidence in its favour. As though this were not enough, the conclusion of my argument is rather weak. For, if successful, the argument only shows that the logicist derivation of spontaneity from substances’ property of conceptual completeness is flawed, not that spontaneity should be relocated from substances’ complete concepts to their complete natures, as Limited Spontaneity requires.

In this and the next section I aim to substantiate and extend my argument by addressing these topics. We begin with miracles and their possibility. Then, in section 4, we turn to Limited Spontaneity, my argument for which gives the missing evidence for proposition (3). One caveat: no independent argument will be offered for (4), the claim that miracles require external influence. My reason for this is that if miracles are possible and they are not spontaneous, then (4) follows. For Leibniz would not of course accept events having no cause. So, if the cause of a miracle is not the very substance to which it occurs, then miracles require external influence.²⁷⁸ What about (2), the premise that all of a

²⁷⁸ Whose external influence? Either God or God ‘through’ some angel. This raises some *prima facie* problems, on which see n. 341 below.

substance's true predicates – humdrum and miraculous – are contained in the concept of that substance? It is unarguably true. If it were false, two options would remain: either there are miracles but substances have no complete concepts or substances have such concepts but the problem of miracles is non-existent because there are no miracles. But, as we shall see, miracles are a problem for Leibniz, one which actually springs from the fact that all of a substance's true predicates – humdrum and miraculous – are contained in its complete concept.

3.2. *That miracles are possible*

The *DM* has a clearly recognisable structure. As Sleight (1990: 137) points out, it begins and ends with God, the metaphysics of created substance coming in between. The most significant portion of that metaphysics occurs, arguably, in §§ 8–15. Significant as it is, Leibniz decided to insert that portion right in the middle of two sections, namely §§ 7 and 16, devoted to the topic of God's 'miraculous or extraordinary concourse' (A VI, 4: 1538, 1554). Whatever Leibniz's final story about miracles may turn out to be, there can be little doubt that he regarded them as exerting a great deal of pressure on his metaphysics of created substance.

Not surprisingly, of course. For, on the one hand, that metaphysics enshrines the claim that substances are complete beings having complete individual concepts, that is, uniquely applicable concepts which fully specify, from all eternity, all that is going to happen to the beings to which they apply.²⁷⁹ This claim is readily associated with Leibniz's conception of truth as containment of the predicate in the subject, but it seems to trade on a deeper commitment, driving Leibniz's reasoning from *DM* § 6 onwards, to the all-pervading general order of the actual universe, one to which absolutely everything that happens, whether ordinary or extraordinary in kind, must abide.²⁸⁰

Yet, on the other hand, Leibniz believed that miracles *can* occur, and *have* indeed occurred, in this world. Several passages confirm this. (i) For instance, in a letter to Ernst of March 1684, Leibniz says that he holds 'the central mysteries of Christianity' – which he

²⁷⁹ See e.g. A VI, 4: 1619; A VI, 4: 1540.

²⁸⁰ See especially A VI, 4: 1537 and A VI, 4: 1539, 6. See also A II, 2: 73.

regards as miracles and among which he mentions the Eucharistic and the resurrection of the body – to be ‘possible (*possibles*) and, since God has revealed them..., to be truths (*veritables*)’ (A I, 4: 325).²⁸¹ (ii) Pointing in the same direction yet going beyond the central Christian mysteries is a letter to Burnett of 1/11 February 1697, where Leibniz approvingly refers to M. Huet’s demonstration of the miraculous status of the prophecies in the Hebrew Bible on the ground that ‘the prophets of the old testament have been precisely fulfilled in the person of Jesus Christ, and God alone is able to tell precise details of the future’: ‘This reasoning is sound (*bon*)’, Leibniz remarks (GP III: 191).²⁸² And this is not an exceptional text. (iii) Though without mentioning any prophecy in particular, essentially the same point is part of Leibniz’s reply, dated to 23 October 1691, to a letter from his patroness Sophia, who, with singular bluntness, contented that ‘everything that happens is natural, even when we do not know the cause of it’ (A I, 7: 44). This is Leibniz’s reply:

When Nature is spoken of in the common sense it is understood as the nature of finite substances, and in this sense it is not impossible for there to be something supernatural, which surpasses the force of every created being...And I have shown in an earlier letter that one encounters that every time one finds a succession of true prophecies that go into detail. (A I, 7: 46–7)²⁸³

(iii) A final piece of evidence that Leibniz believe in the possibility of miracles comes from his opening remarks in § 16 of *DM*. After having presented the complete-concept theory of substance (§ 8) and elaborated on a series of ‘paradoxes’ and consequences that follow from it (§§ 9–15), he writes:

²⁸¹ As in other places, in this letter Leibniz also mentions the Trinity and the Incarnation among the central Christian mysteries he thought ‘possible’ and ‘veritable’. However, these particular miracles are not relevant to my argument, for they do not occur to *finite* beings. Regarding the resurrection of the body, I should register that Leibniz’s attitude towards its miraculous status is not entirely clear. See e.g. A VI, 3: 365, n. 5, where he appears to treat it as demonstrable through reason alone. Be this as it may, note that what is at stake in this case is not the immortality of souls – or, more generally, of true substances – which Leibniz thinks are *naturally* immortal. See NE 68 for a statement of this view in the context of the topic of miracles. See also A VI, 4: 1541; GP IV: 480, GP VI: 607. On Leibniz’s conception of the Trinity and the Incarnation as true mysteries, see Antognazza (2007a).

²⁸² As Cook (2009: 274) points out, the emphasis of Leibniz’s approval of Huet’s reasoning must be placed on the phrase ‘*precise details* of the future’, which is in fact what Leibniz takes to be the only certain sign of the genuine miraculous status of prophecy. See also A I, 7: 36, 46–7.

²⁸³ Translation in Adams (1994: 91–2). On the function of the qualifier ‘that go into detail’, see the previous note. The earlier letter Leibniz refers to is, I think, the one from 13 October 1691 (A I, 7: 33–7), in which the same requirement of ‘detailed future-telling’ for divinely inspired prophecy is set out. See A I, 7: 36, 4–5.

It now only remains to explain how God can sometimes influence men and other substances by an extraordinary or miraculous concurrence, since it seems that nothing extraordinary or supernatural can happen to them. (A VI, 4: 15/AG 48)

Leibniz's concern here is not whether or *if* miracles are possible: it is *how* (*comment*) they are possible. This question would be pointless had Leibniz believed *that* miracles are impossible. True, not much can be made of this if we do not know first what exactly Leibniz *meant* by 'extraordinary or miraculous concurrence'. We shall find opportunity to discuss Leibniz's conception of miracles as we proceed. At this early stage, however, it seems fair to bracket our questions and confine ourselves to Leibniz's. And, if we do so, then the conclusion (i)–(iv) support is, I think, clear: Leibniz believed that miracles are possible.

The question, of course, is how.

3.3. *How miracles are possible (I): key text and key distinctions*

The key text in which Leibniz addresses this question is § 16 of *DM*:

It now only remains to explain how God can sometimes influence men and other substances by an extraordinary or miraculous concurrence, since it seems that nothing extraordinary or supernatural can happen to them, given that all their events are only consequences of their nature. But we must remember what we have said above concerning miracles in the universe – that they are always in conformity with the universal law of the general order, even though they may be above the subordinate maxims.²⁸⁴ And to the extent that every person or substance is like a small world expressing the large world, we can say equally that the extraordinary action of God on this substance does not fail to be miraculous, despite the fact that it is included in the general order of the universe insofar as it is expressed by the essence or individual notion (*l'essence ou notion individuelle*) of this substance... We could call that which include everything we express our essence or idea (*essence ou idée*); since this expresses our union with God himself, it has no limits and nothing surpasses it. But that which is limited in us could be called our nature (*nature*) or our power; and in that sense, that which surpasses the nature of created substances is supernatural. (A VI, 4: 1554–5/AG 48–9)²⁸⁵

²⁸⁴ Leibniz is referring to *DM* § 7 (A VI, 4: 1538, 19–1538, 2) and, via § 7, to § 6 (A VI, 4: 1537, 16–21).

²⁸⁵ I have cut off some portions of the text. Some of them will be considered as we go along.

Scholars' opinions about this text vary. Some have claimed the distinction between individual notion – or essence – and nature that it draws to be 'opaque', whereas others have tended to ignore it.²⁸⁶ Other scholars, however, foremost among them R. Sleigh, have taken the distinction very seriously, and they are who most interest us here. Sleigh writes:

Leibniz thought of the natural order of things as what is true in virtue of the natures of individual substances. He drew a sharp distinction between the nature of a substance and its complete individual concept. That distinction, in turn, serves as the basis for Leibniz's account of what a miracle is. (1990: 23)²⁸⁷

That Leibniz's distinction between nature and individual concept is, as Sleigh puts it, 'sharp' might seem a bit of a stretch, for Leibniz's employment of the relevant terminology is not in fact entirely consistent.²⁸⁸ In *DM* § 13, for example, Leibniz refers to the individual concept of a substance as its 'nature *or* (*ou*) notion' (A VI, 4: 1546). And in a draft for a letter to Arnauld penned in December 1686, he seems to be as unconcerned with what he has written about a year before as to write: 'The soul being an individual substance, it is necessary that its concept, idea, essence or nature envelop everything that is to happen to it' (A II, 2: 111).²⁸⁹ However, neither of these passages is expressly devoted to the problem of miracles. So, there is no reason to expect Leibniz to be particularly careful about the relevant terminology in them. By contrast, *DM* § 16 is expressly devoted to the problem of miracles, and there we find the distinction, sharply and neatly drawn. It would surely be unfair on our part to judge the significance of a distinction in light of contexts in which there is nothing demanding it.

In any case, Leibniz's distinction in *DM* § 16 is not so difficult to pin down. It is deployed at three complementary levels, namely

²⁸⁶ See Stevenson (1997: 173) and Woolhouse (1985). In fairness to these scholars, I must clarify that neither of them denies that there *is* in fact a distinction to be made between complete concept and nature in Leibniz's philosophy. It seems to me, however, that the distinction Woolhouse has in mind is fundamentally different from the one Leibniz draws in *DM* § 16. In particular, Woolhouse thinks that there is a 'one-one correspondence' between the essence/complete concept of a substance and its nature (1985: 206), which is precisely what Leibniz appears to be denying in *DM* § 16, as we shall see. For more on Woolhouse's view, see Kulstad (1993b: 478–9).

²⁸⁷ See also Kulstad (1993b), Dowe (1996: 161), and Jolley (2005: 125–6).

²⁸⁸ Sleigh is well aware of this, of course. See Sleigh (1990: 79).

²⁸⁹ Translation in Sleigh (1990: 79). For a later text, see Leibniz's *Dialogue on human freedom and the origin of evil* (1695), where 'essence' and 'nature' are used interchangeably: '*Essences ou Natures*', Leibniz writes. See Gr. 365. See also A VI, 4: 1581 and NE 66. For more on this, see Jolley (2005: 126), particularly his comments on NE 66.

- A. essence/nature,
- B. concept-essence/nature, and
- C. concept-essence-general law of order/nature-laws of nature (or subordinate maxims).

Before presenting Leibniz's strategy for the possibility of miracles, it will help to consider these distinctions in some detail.

A. Essence/nature. First, very briefly, a substance's essence is one thing, its nature is another. While everything which is included in the nature of a substance is included in its essence, not everything which is included in its essence is included in its nature. That is, natural events or predicates are a subset within the wider set of events or predicates ascribable to a substance by virtue of its essence.

B. Concept-essence/nature. A substance's 'individual notion' (*notion individuelle*) or 'idea' (*idée*)²⁹⁰ is the perfect logical correlate of its essence. That is, there is an exact, one-one correspondence between what is included in a substance's essence and what is included in its individual concept.²⁹¹ However, this is not so with respect to a substance's nature and its individual concept. For, as we have just seen in A, there are predicates included in a substance's essence which are not included in its nature. Given the exact, one-one correlation between essence and individual concept, it follows from this that there are predicates included in a substance's individual notion which are not included in its nature. So, in conclusion, we can say that the concept/essence of a substance contains more than its nature and must therefore be distinct from it.

Here we need to stop for a while. For, seen in connection with other texts from the *DM* period, this conclusion might suggest a conception of nature which I think is *not* Leibniz's, and which actually *cannot* be Leibniz's if the distinctions in *DM* § 16 are meant

²⁹⁰ The equation 'idea/individual notion' is also made in § 14 of the second draft of *DM*. See A VI 4, 1551: '*idée ou notion complete*' (note to line 7). In the first draft, however, which is the one reproduced by the Academy editors, Leibniz writes '*idée toute seule*' (period).

²⁹¹ The 'one-one correspondence' terminology comes from Ishiguro (1979). Both Woolhouse (1985) and Kulstad (1993b) employ it.

to secure the possibility of miracles. Before moving on, it is then important that we spend some time trying to remove it. We shall consider Leibniz's positive view of nature in the next section.

Consider these two passages:

- [a] There is nothing in me at all that can be conceived *sub ratione generalitatis seu essentiae seu notionis specificae sive incomplete* [in general terms, i.e. in terms of essence, or of a specific or incomplete concept²⁹²], from which one can infer that I shall necessarily take [a journey], whereas from the fact that I am a man one can conclude that I am capable of thought; and consequently, if I do not take this journey, that will not do violence to any eternal or necessary truth. (To Arnauld; A II, 2: 74/LA 58)
- [b] It is necessary to distinguish between those things which are of the essence (*Essentia*) of something and those which are of its [individual] notion. Of the essence of a thing is that which is necessarily and perpetually, but of the concept of an individual (*singularis*) thing is also (*etiam*) what pertains to it contingently or accidentally. (*De Libertate Creaturae Rationalis*; A VI, 4: 1593 = Gr. 383)²⁹³

We may begin by noticing that, in text [a], Leibniz equates a substance's essence with its 'specific or incomplete concept', a concept which belongs to that substance as it is conceived *sub ratione generalitatis*. Let us refer to this essence as the 'specific essence'. As in [a], in text [b] Leibniz also employs essence in the sense of specific essence. This is clear from the fact that, in both [a] and [b], the notion of essence is associated with the idea of necessary truth. However, the type of concept Leibniz has in mind in [b] is not the one he has in mind in [a]: the latter talks of incomplete concepts, whereas the former of individual concepts. Accordingly, in [b] Leibniz does not equate, as he does in [a], essence with concept but rather distinguish them. We can summarise the relevant equations and distinctions in these texts by saying that

²⁹² Leibniz left this phrase in the Latin.

²⁹³ Dated to Spring-Summer 1686 by the Academy editors. In their translation of [b], Cover-O'Leary-Hawthorne omit the 'etiam' in the last sentence, rendering it as '...; of the concept of the individual thing *on the other hand* is what pertains to it contingently or per accidents' (1999: 127–8; my emphasis). This retains the adversative force of the 'but' (*vero*), but I think that it alters the meaning of Leibniz's point: it suggests the view that the concept of an individual thing – i.e. its individual concept – contains *only* contingent or accidental properties, which is neither what Leibniz says nor (in my opinion) what he wants to express. See the passage from *De Libertate, fato, gratia Dei* quoted below.

- (5) 'essence' *qua* specific essence = incomplete concept

and

- (6) 'essence' *qua* specific essence \neq individual concept

Now, if we look at these propositions against the backdrop of *DM* § 16, we can readily see that the sense in which Leibniz uses 'essence' in that text cannot be the one operating in (5) and (6). For, as we have seen, part of Leibniz's point in *DM* § 16 is that essence *equals* individual notion – '*l'essence ou notion individuelle*' (A VI, 4: 1555, 3–4) and hence that essence is *distinct* from incomplete concept. This is the opposite of what we find in (5) and (6). Therefore, as I said, the sense in which Leibniz employs 'essence' in *DM* § 16 is not that of specific essence. Positively, 'essence' in *DM* § 16 means *individual* essence.²⁹⁴ This leaves us with the following propositions as a summary of Leibniz's views on essence and its relation to concept types in *DM* § 16:

- (7) 'essence' *qua* individual essence \neq incomplete concept

- (8) 'essence' *qua* individual essence = individual concept.

But quite how, one may ask at this point, does all this relate to Leibniz's notion of nature in *DM* § 16? The answer is implicit in [a] and [b]. Reconsider those texts. There is a modal issue underwriting the distinctions they display. Briefly put, the specific essence/incomplete concept of something delivers what belongs 'necessarily and perpetually' to it. By contrast, the individual essence/complete concept delivers more than that, namely what is necessarily and perpetually true of something plus what pertains 'contingently or accidentally' to it. A particularly clear statement of this doctrine occurs in *De Libertate, fato, gratia Dei*:

²⁹⁴ As pointed out by Grua in the course of his edition of a *De Libertate, fato, gratia Dei*, where Leibniz uses the notion of essence (Gr. 311: '*essentialia*') both in the sense in [a]–[b] and in that operative in *DM* § 16. See Gr. 311, n. 152.

[I]n this complete concept of possible Peter, which I concede is seen by God, are contained not only essential or necessary things (*essentialia seu necessaria*) – that is, things which flow from the incomplete or specific notion (*notionibus incompletus sive specificis*) and which are demonstrated from the terms in such a way that their denial implies a contradiction – but also, as it were, existential or contingent things. (A VI, 4: 1600 = Gr. 311)²⁹⁵

Now, according to [a], ‘capable of thought’ – as opposed to ‘taking a journey’ – is a necessary property of a man. That is, capable of thought is an example of the kind of property which applies to a man by virtue of its specific essence/incomplete concept. But capable of thought, one might reason, is a *natural* property of a man: it is of the nature of every man to have such a property. So, putting all this together, the conclusion might suggest itself that the notion of nature in *DM* § 16 is the notion of specific essence/incomplete concept featuring in texts [a] and [b], or that

(9) nature = specific essence = incomplete concept.

It takes only a moment of reflection to realise that, *prima facie*, this conclusion fits remarkably well with the doctrines in *DM* § 16 and in texts [a] and [b]. For, in the former, Leibniz distinguishes nature from individual essence/complete concept. And, in [a] and [b], he distinguishes individual essence/complete concept from specific essence/incomplete concept. So, if we assume that (9) is Leibniz’s view, his distinction between nature and individual essence/complete concept in *DM* § 16 seems to make perfect sense. But not only that. For, if (9) is Leibniz’s view, then it would seem we have reached an explanation for Leibniz’s claim that there are predicates included in a substance’s individual concept/individual essence which are not included in its nature: while the former include necessary and contingent predicates, the nature of a substance, having been equated with its specific essence, includes necessary predicates only. In short, then, the import of Leibniz’s distinction between concept-essence and nature in *DM* § 16 would be this: on the one hand, there is a substance’s nature/specific essence/incomplete concept, the source of its

²⁹⁵ This text has been dated to Spring-Winter 1686/7 by the Academy editors and 1683/6 by Grua, that is, roughly the same period as [a], [b], and *DM* § 16.

necessary and eternal properties; on the other, there is a substance's individual essence/complete concept, which also includes its contingent properties.

And yet, as attractive as this 'modal interpretation', as we may call it, of Leibniz's view may seem, I think it is not his view in *DM* § 16. To see why, we must turn to Leibniz's third distinction.

C. Concept-essence-general law of order/nature-laws of nature (subordinate maxim). Corresponding to the distinction between concept-essence and nature there is a further distinction between the 'universal law of general order' and 'subordinate maxims' or 'laws of nature' (A VI, 4: 1556). The general law of order codifies everything that is included in the essence or individual concept of a thing. The laws of nature, contrastingly, codify everything that belongs to its nature. Thus, making the appropriate alterations, the chief claims at this level parallel those in A and B: while everything falling under the scope of natural laws falls under the scope of the general law of order, not everything falling under the scope of the general law of order falls under the scope of natural laws – the former includes more than the latter.

This distinction blocks, I think, the modal interpretation of the concept-essence/nature distinction sketched above. What I have in mind is rather simple. First of all, note that in *DM* § 7 Leibniz refers to natural laws as the 'nature of things' (A VI, 4: 1538: '*nature des choses*'). That is to say, the laws of nature are embedded in the natures of things. Now, according to the modal interpretation of the concept-essence/nature distinction, a thing's nature is its specific essence and hence the source of necessary and perpetual truths, whereas the individual concept/individual essence includes also the contingent. But if this is correct, and if the laws of nature are embedded in the natures of things, then we would expect the laws of nature to be *necessary and perpetual truths* or, to put it in the language of *De Libertate, fato, gratia Dei*, truths 'which are demonstrated from the terms in such a way that their denial implies a contradiction' (A VI, 4: 1600).

But Leibniz rejects this. As Vailati (1995: 574) rightly observes, in *DM* § 7 Leibniz points out that the natures of things depend on God's *will* and that, like the laws of nature they embed, they are only 'God's *custom*' (A VI, 4: 1538/AG 40; my emphasis). By Leibniz's lights, this means that things' natures and the laws governing them are

contingent: they only obtain under the presupposition of God's free volitions and supreme wisdom. As we read in an important passage from in *Mon.* § 46:

God's understanding is the realm of eternal truths or that of the ideas on which they depend...However, we should not imagine, as some do, that since the eternal truths depend on God, they are arbitrary and depend on his will (*volonté*), as Descartes appeared to have held, and after him M. Poiret. This is true only of contingent truths (*verités contingentes*), whose principle is fitness (*convenance*) or the choice of the best. But necessary truths depend solely on his understanding. (GP VI: 614/AG 218–9)²⁹⁶

Here the division of labour is clear: the source of eternal truths is God's understanding; that of contingent truths is his will. Hence, if natural laws derive from God's will, they are contingent. Leibniz's talk of '*convenance*' reinforces this claim, for in some writings he explicitly describes what is natural as '*convenable*'. Preparing a reply to Lamy, Leibniz writes with what is surely a hint of exasperation:

[I]t is said: a natural consequence is a necessary consequence. I reply that I do not accept that at all, and I am astonished that he should take up such positions in order to accuse me of error. What is natural is appropriate (*convenable*) to the nature of the thing, but what is necessary is essential, and cannot be changed. Leaves grow on trees naturally, but they still fall off. (GP IV: 592/WF 166)

True, these remarks do not tell us what exactly nature is. But they do make clear one important point about it: nature is not the specific essence, the source of necessary and perpetual truths.

3.4. *How miracles are possible (II): Leibniz's strategy for miracles*

With these distinctions and remarks in place, we are now in a position to present Leibniz's strategy for securing the possibility of miracles in *DM* § 16. That there is a *prima facie*

²⁹⁶ What 'is true only of contingent truths' is not of course that 'they are *arbitrary* and depend on God's will', but only that they depend on God's will. I read this passage as articulating Leibniz's well-known middle-ground position between Cartesian/occasionalist voluntarism on the one hand and Spinoza's necessitarianism on the other. See e.g. GP IV: 594/WF 169: 'I do not agree that...laws of nature are purely arbitrary. There was no absolute necessity (*nécessité absolue*) for God to establish them; but he was nevertheless led to do so by some reason, in accordance to his supreme wisdom, and by a certain suitability to the nature of things'. See also GP VII: 344.

problem for miracles, recall, stems from the two interwoven claims (i) that substances have complete individual concepts, and (ii) that everything is governed by the exceptionless general law of order. Accordingly, Leibniz's strategy can be seen to apply on these two levels. In both cases, the strategy hinges on a definition of miracle.

(i) With respect to complete concepts, we have that

(10) a miracle 'is included...by the [individual] essence or individual notion' of a substance (A VI, 4: 1554, 2–3),

which might seem to be in conflict with the claim that

(11) a miracle is an event that 'surpasses the nature of created substances'. (A VI, 4: 1555, 19–20)

But the conflict is only *prima facie*. For, as seen in A and B, all that is included in a substance's nature is included in that substance's individual essence/complete concept, though not all that is included in its individual essence/complete concept is included in its nature. Hence, an event can be beyond a substance's nature while being included in its individual essence/complete concept. And such an event is a miracle, as (11) shows. Further, while surpassing the nature of substances, miracles entail no violation of necessary and perpetual truths, for, as I have argued, the nature of a substance is not its specific essence, which is the source of such truths.

(ii) *Mutatis mutandis*, the same reasoning applies to the exceptionless general law of order:

(12) miracles are 'included in the general order of the universe' (A VI, 4: 1554, 2–3).

This seems to be in conflict with the claim that

- (13) miracles are ‘above the subordinate maxims’ or laws of nature (A VI, 4: 1554, 23–4).

Yet, again, no cause for alarm. For, as seen in C, although it is true that everything which falls under the scope of natural laws falls under the scope of the general law of order, not everything which falls under the scope of the general law of order falls under the scope of natural laws. Hence, an event can surpass the laws of nature without being an exception to ‘the most general of God’s laws, the one that rules the whole course of the universe...without exception’ (A VI, 4: 1538/AG 40). And such an event is a miracle, as we learn from (13). This is metaphysically possible, because laws of nature are contingent: they are embedded in the nature of things, which is not their specific essence. And so, we can conclude, the possibility of genuine miracles is secured in a Leibnizian world of complete concepts and all-pervading order.

Or can we?

3.5. From Leibniz’s strategy for miracles to the thesis of Limited Spontaneity: a difficulty with, and a strategy for, that thesis

Hitherto I have offered textual evidence that Leibniz believes that miracles can occur, and have indeed occurred, in the actual world. On the basis of a series of distinctions Leibniz draws in *DM* § 16, I have also explained how miracles are possible for him. But can we go further? More specifically, do Leibniz’s distinctions and strategy allow us to establish Limited Spontaneity?

Let us reconsider *vis-à-vis* the two versions of Leibnizian spontaneity formulated in the introduction:

- (1) Necessarily, for any (non-initial) state, P, for any substance, *a*, if *a* has P, then P has *a*’s own intrinsic powers as its real cause.
- (1*) Necessarily, for any (non-initial) natural or non-miraculous state, P, for any substance, *a*, if *a* has P, then P has *a*’s own intrinsic powers as its real cause.

I think there is nothing in Leibniz's distinctions in *DM* § 16, nor in the strategy for miracles they undergird, which licenses us to pass from (1) to my Limited Spontaneity in (1*). Here is a fairly natural reading of Leibniz which retains those distinctions and strategy while leaving Leibnizian spontaneity just as it stands in (1), that is, as applying to every event whatsoever, miraculous or not. To avoid repetition, I shall phrase the point in terms of nature only, leaving laws of nature aside: just as natural predicates – as we have seen in A and B – are a subclass within the wider class of predicates ascribable to a substance by virtue of its individual essence/complete concept, *naturally spontaneous* operations form a *subclass* within the wider class of operations that substances perform spontaneously. That is, the spontaneity of substances *cuts across* Leibniz's distinction between individual essence/complete concept and nature. As he understands them, miracles are events which lie outside the natural-spontaneous-operations subclass. However, they are within the wider spontaneous-operations class. Such events continue to be miraculous, because they continue to surpass the natures of substances, which is all that the definition of miracle in (11) demands. Thus, the possibility of miracles demands no relocation of spontaneity to nature: the relocation of miracles to beyond-nature spontaneity is enough.²⁹⁷

Although this interpretation cannot be dismissed too quickly – Leibniz does, after all, say in some passages that there is spontaneity everywhere²⁹⁸ – my goal in the remainder of this chapter will be to try to convince the reader that it is not Leibniz's view. More specifically, I will try to show that Limited Spontaneity is Leibniz's conception of spontaneity *tout court*: events included in the natures of substances are spontaneous; period.²⁹⁹ To this effect, I shall adopt the following strategy. Propositions (11) and (13) define miracles as events which surpass the natures of created substances and natural laws, respectively. What we are lacking so far, and what is necessary for Limited Spontaneity to be established, is a strong link between Leibnizian spontaneity and the notions of nature

²⁹⁷ For this view, see e.g. Cox (2002: 202).

²⁹⁸ See e.g. GP IV: 505 and A II, 2: 53. That there is spontaneity everywhere is also suggested by Leibniz's claim, in *DM* § 32, that 'every substance has a *perfect* spontaneity' (A VI, 4: 1581/AG 64; my emphasis). See also GP IV: 484. However, there are other passages in which Leibniz says that substances spontaneity is imperfect: '...the imperfection present in our knowledge and our spontaneity' (GP VI: 288/H 303).

²⁹⁹ By this I do not mean to deny that there may be different *types* of spontaneity for Leibniz (e.g. 'metaphysical spontaneity' as distinct to 'agent spontaneity'), a view for which many scholars have provided solid argumentation. See especially Rutherford (2005) and Jorati (2015c). What I am proposing, rather, is that, whatever types of spontaneity there may be, they will all fall on the side of substances' natural events or predicates.

and natural law that are integral to those definitions. More particularly, we need the following propositions to prove true:

(14) spontaneity is intrinsic causal determination.

(15) nature is intrinsically determining causal power.

Given that miracles, as (11) asserts, are events which surpass substances' natures, if (15) holds true, then miracles surpass substances' intrinsically determining causal powers. And, if (14) holds true, it follows from this that miracles are not spontaneous, which is what Limited Spontaneity claims. Moreover, since, as seen earlier, laws of nature are embedded in substances' natures, this relocation of spontaneity to nature will entail that miracles are above natural laws, in keeping with (13).³⁰⁰

Before proceeding, one further preparatory comment is in order, if only to remove an objection that might come to mind at this point – if it hasn't already.

Maybe – and I stress, *maybe* – there are shorter routes towards Limited Spontaneity than the one I have chosen to take. In support of it, for instance, Mark Kulstad cites passages from the Arnauld correspondence and the *Theodicy* in which Leibniz explicitly defines miracles as events that exceed the *force* of substances – where 'force', arguably, means causal power³⁰¹:

[S]trictly speaking, God performs a miracle whenever he does something that exceeds the forces (*forces*) which he has given to creatures. (A II, 2: 179/LA 93)³⁰²

But creation, incarnation, and other actions of God surpass all the force (*force*) of creatures, and are truly miracles. (GP VI: 265/H 280)³⁰³

³⁰⁰ That 'nature' in the context of Leibniz's discussions about miracles must be interpreted as denoting the causal powers of substances has been defended by Sleight (1990: 78–9) and Kulstad (1993b: 481) (who draws from Sleight). I am indebted to these scholars, but my arguments for (15) differ from theirs. Moreover, they do not argue for (14).

³⁰¹ Leibniz equates force (*force, vis*) with power (*puissance, potentia*) in more than one writing. See e.g. GP IV: 469–70, GP IV: 472, GP IV: 509.

³⁰² As quoted in Kulstad (1993b: 482).

³⁰³ As quoted in Kulstad (1993b: 498, n. 17).

Given Leibniz's definition of miracle in (11), these passages appear to lead fairly quickly to (15). To them we can add the very § 16 of *DM*, at the end of which Leibniz explicitly equates 'nature' with 'power': '*nature ou puissance*', he says. An even more direct pathway to Limited Spontaneity may appear to be signalled by a passage from Leibniz's 30 April 1687 letter to Arnauld, cited by Robert Sleight:

Everything happens in each substance in consequence of the first state that God gave it in creating it and, *extraordinary concourse aside*, his ordinary concourse consists simply in the conservation of the substance itself in conformity with the preceding state and with the change which it carries with it. (A II, 2: 177; my emphasis)³⁰⁴

Here Leibniz is clearly placing miracles outside spontaneity. This is essentially what Limited Spontaneity asserts. Why should I then concern myself with arguing for it?

I must confess that I once thought these passages to be conclusive evidence for Limited Spontaneity. Now I am wary of taking them as so decisive, however. The reason is that against each of these passages an important opposing passage can be brought up. First, opposing Sleight's quotation, consider this less elaborated but more recurrent formulation of the spontaneity thesis, coming from Leibniz's memorandum for his 4/14 July 1686 letter to Arnauld:

[F]or every present state of a substance occurs to it spontaneously and is only a consequence of its preceding state. (A II, 2: 53/LA 47)³⁰⁵

Pretty clearly, here spontaneity is said to range over every state of a substance, miraculous states included.³⁰⁶ Turning now to Kulstad's passages, they might be thought to be insufficient in a similar sense. For while there is no passage known to me in which Leibniz denies that miracles exceed the force of substances, there are passages where Leibniz

³⁰⁴ As quoted in Sleight (1990: 133).

³⁰⁵ Sleight knows, of course, this passage and pays due attention to it.

³⁰⁶ As supporting this, Sleight also quotes the corresponding passage in the actual letter sent to Arnauld (1990: 212, n. 31). However, it seems to me that what Leibniz says in it is different from what we find in the draft:

[The] succeeding state [of every individual substance] is a sequel of its preceding state. (A II, 2: 80/LA 64).

In this formulation, the universal quantifier ranges over 'individual substances', not over their states. Therefore, it is consistent with Leibniz's 'restrictive' formulation of spontaneity in his letter form 30 April 1687.

explains his notion of the miraculous in a way which, if read in combination with Kulstad's quotations, might suggest a construal of 'force' which is not quite the one required by Limited Spontaneity. Somewhat alarmingly, one such passage comes precisely from *DM* § 16. In a portion of that section that I deliberately omitted from the long quotation at the beginning of 3.3, we read:

God's miracles and extraordinary concourse have the peculiarity (*ont cela de proper*) that they cannot be foreseen by the reason of any created mind, no matter how enlightened, because the distinct comprehension of the general order surpasses all of them. (A VI, 4: 1555/AG 49)

As far as this text goes, Leibniz's criterion for something to qualify as miraculous is purely epistemic. That miracles surpass the force or power of substances could therefore mean that they are events for which no finite mind can give a *reason*. This is clearly consistent with miracles being just a special type of spontaneous event, namely spontaneous events whose causes, unlike those of natural events, we cannot determine.³⁰⁷

It should go without saying that by pointing to this dialectic of *prima facie* conflicting texts I do not mean to imply that Kulstad's and Sleight's passages are unimportant for a defence of Limited Spontaneity. Nor do I mean to suggest that they are less important than, and ultimately outweighed by, those opposing them. For instance, it should be particularly obvious that I do not believe that the epistemic account of miracles just sketched represents Leibniz's considered view on the matter. Never mind that he is only singling out 'a peculiarity' miracles have, not offering a statement of what they formally are: recall Leibniz's reply to Sophia, quoted above, in which he expressly rejects the epistemic view and, most tellingly, *opposes* it to the view that miracles are events which 'surpasses the force (*force*) of any created being' (A I, 7: 46–7). Rather, the moral to be extracted from all this is that, with important passages speaking in favour and against it, the case for Limited Spontaneity cannot simply be settled by pointing to texts: they need to be complemented with a more systematic line of argument. And that is what I am going to do.

³⁰⁷ The same is suggested by an exceptionally complete 'Table of Definitions' – dated by Couturat to 1702/4 – where Leibniz says that 'a miracle is a divine action which transcends human knowledge or, more strictly, which transcends the knowledge of creatures' (C 508). This is little short of Spinoza's view that a miracle is not a genuinely supernatural event: "the term 'miracle' means nothing but a work whose natural cause we cannot explain by the example of another familiar thing" (Gebhardt III: 83–4/CWS II: 155).

One good place to look for the required supplementation is Leibniz's objection that occasionalism entails perpetual miracles (an objection to which Leibniz also thought the Newtonians were liable, and for the very same reason as the occasionalists). In 4.2, we concentrate on some aspects of this criticism which demonstrate that nature means intrinsically determining causal power, as (15) claims. We start off, however, with (14).

4. *The positive case from miracles: for Limited Spontaneity*

4.1. *Spontaneity and intrinsic causal determination [(14)]*

In the *Nicomachean Ethics*, Aristotle defines 'spontaneous' as something 'the principle of which is in the agent'.³⁰⁸ In the early modern period, the same account is found – sometimes literally, sometimes not – in a number of widespread philosophical dictionaries, such as Micraelius's *Lexicon Philosophicum*, B. Faber's *Thesaurus*, among others.³⁰⁹ Leibniz probably knew some of these works, and he certainly knew Aristotle's account of 'spontaneous' in the *Nicomachean Ethics*, which he approvingly quotes on at least one occasion.³¹⁰

In conceiving of substances as spontaneous entities, Leibniz draws on the Aristotelian account. But he turns it into something metaphysically more potent. This something is (14): spontaneity is intrinsic causal determination. We have already met this claim under a different guise. According to premise (3) of my argument in section 2, a state (property, event, effect) is spontaneous if, *and only if*, it originates in the substance to which it applies. Both statements are meant to express the same proposition, and I shall therefore treat them as one. The proposition they express is this: spontaneous events are brought about by the intrinsic causal powers of substances and by those powers *alone*.

³⁰⁸ See *EN* III, 2, 1111a22–4. This is not exactly what Aristotle says, but it is Leibniz's and others' way of stating Aristotle's view. See below text [a] and Volckmar, *Dict. Phil.* p. 670. Aristotle's word for an effect or event which has 'the principle in the agent' is '*hekousios*', which Leibniz and other seventeenth-century philosophers translated as 'spontaneous'. Again, see below text [a] and Volckmar, *Dict. Phil.* p. 670. Modern editions of Aristotle usually render '*hekousios*' as 'voluntary', the extension of which is (both for Leibniz and Aristotle) narrower than that of 'spontaneous'.

³⁰⁹ See Micraelius, *Lexicon* (1662), p. 1286 ('Spontaneum'); Faber, *Thesaurus* (1696), p. 2193 ('Sponte'). Volckmar, *Dict. Phil.* (1675), p. 670, ('Spontaneum').

³¹⁰ See *GP* VI: 296; *A* IV, 7: 572; *A* I, 5: 195; *A* I, 10: 333.

Thus, the principle of a spontaneous event is, as Aristotle says, ‘in the agent’. But there is more: it must be a sufficient, *determining* principle.

In chapter 1, section 3.3, I contended in passing that this strong conception represents Leibniz’s more exact view of spontaneity (though texts suggesting a less exact and weaker view can also be found in his writings). Now I have to reinforce my contention with appropriate argumentation. Here are my texts³¹¹:

- [a] The spontaneity of our actions can therefore no longer been questioned. And Aristotle has defined it well, saying that an action is spontaneous when its source is in him who acts... Thus it is that our actions depend *entirely* (*entierement*) upon us. (GP VI: 296/H 309–10)

- [b] Spontaneous substance is *the one and only* source (*unum et solum...fontem*) of its own modifications. (C 14/MP 175)

- [c] [F]or every present state of a substance occurs to it spontaneously and is *only* (*n’est qu’*) a consequence of its preceding state. (A II, 2: 53/LA 47)

- [d] As for Spontaneity, it belongs to us insofar as we have within us the source (*principium*) of our actions...The impression of external things often, indeed, divert us from our path, and it was commonly believed that, at least in this respect, some of the sources of our actions were outside ourselves. I admit that one is bound to speak thus, adapting oneself to the popular mode of expression, as one may, in a certain sense, without doing violence to the truth. But when it is a question of expressing oneself accurately I maintain that our spontaneity suffers *no exception* and that external things have no physical influence upon us. (GP VI: 289/H 303)³¹²

These passages clearly indicate that, on Leibniz’s view, spontaneous events are such that the powers which bring them about are not merely *conditiones sine quibus non*: they are sufficient powers. What I want from [a]–[c] are the adverbial locutions and adjectives: ‘*entierement*’, ‘*unum*’, ‘*solum*’, ‘*n’est qu’*’. Text [c] is equally clear: accurately speaking, substances exert *no* real influence on each other and hence their states depend solely on

³¹¹ In all the texts that follow italics are mine.

³¹² With the exception of [c], these passages occur in the context of Leibniz’s account of human freedom, of which spontaneity is a component. See GP VI: 288, GP IV: 519. However, this does not mean that spontaneity applies to rational beings only. See GP VI: 289. For attempts at refining the notion of spontaneity so as to make room for differences between human and non-human spontaneity, see especially Rutherford (2005) and Jorati (2015c).

themselves.³¹³ The same conclusion is evidenced by Leibniz's response to one of Bayle's objections to *NS*. In the second edition of his *Dictionnaire*, Bayle refers to the (purported) constraints substances must impose upon the 'spontaneity of each other' (WF 95). Leibniz replies:

[e] [W]e must bear in mind that for all time each substance has been accommodated to every other, and adapts itself to suit what the others will demand of it. There is therefore *no constraint* (*il n'y a de la contrainte*) in substances except in external appearance. (GP IV: 558/WF 111; my emphasis)

So [a]–[e] come all to the same conclusion, namely that spontaneity is immanent casual determination. That is, (14).

4.2. *Natures, causes, and perpetual miracles: Leibniz against the occasionalists (and the Newtonians)* [(15)]

With (14) in hand, we can now turn to (15), the claim that nature is intrinsically determining causal power. Since miracles, recall, are events that surpass the nature of substances (laws of nature) and spontaneity denotes the determining activity of substances' causal powers, the identification of nature (laws of nature) with those powers (general propositions based on them) will demonstrate Limited Spontaneity. As I anticipated, we shall focus on Leibniz's objection that occasionalism (as well as Newtonianism) entails perpetual miracles, at the basis of which is the identification, or so I shall argue, of substances' natures with their causal powers we are looking for.

On the face of it, Leibniz's objection that occasionalism entails perpetual miracles might seem something of a nonstarter.³¹⁴ So it seemed to the learned Bayle, who, in the extensive footnote H to his dictionary article 'Rorarius', replied to Leibniz's objection with the following comment:

³¹³ This is in keeping with the view, defended in chapter 2, that, for Leibniz, there are no extrinsic denominations *at all* – rather than no 'purely' extrinsic denominations. Argumentation for the physical/real equation I am assuming has been given in chapter 1 (p. 39).

³¹⁴ In Leibniz's lifetime, some philosophers – for example Arnould – raised the objection that occasionalists are left with *no* miracles, rather than with perpetual ones. See Vailati (1995: 570, n. 17), Jolley (2005: 121). This being so, Leibniz's objection might also seem rather odd.

The reason why this clever man [*sc.* Leibniz] finds the Cartesian system not to his taste seems to me to be based on a false supposition; it cannot be said that the system of occasional causes, with its reciprocal dependence of body and soul, makes the action of God into the miraculous interventions of a *Deus ex machina*. For since God intervenes between them only according to general laws, in doing so he never acts extraordinarily. (WF 74)³¹⁵

Bayle's reasoning seems to be this. According to Malebranche, the production of creatures' ordinary – i.e. non-miraculous – states is governed by divine general volitions, which in turn are consequences of the general laws God has established.³¹⁶ Now, these general laws are, for Malebranche, *natural laws*: 'Properly speaking, what we call "Nature" is nothing else than the general laws which God has established to construct and conserve his work' (OM V: 148). By contrast, miracles are effects that are 'not produced by God in consequence of his general laws, which are natural laws': they result from God's 'particular volitions' (OM VIII: 696).³¹⁷ Therefore, Leibniz's objection from perpetual miracles is based on a false supposition. For that objection would only be effective if one assumes that ordinary events result from God's particular volitions, which is what determines that a Malebranchean effect is miraculous. But this assumption is false: ordinary events are consequences of general laws – laws based on God's general volitions – and these laws are natural laws.

For someone working within Malebranche's system, this reasoning is faultless. Where Bayle goes astray, however, is in assuming that Leibniz's objection is meant to be an internal criticism of Malebranche's system. Consider how Leibniz begins his reply to Bayle's comment:

Let us see, however, whether the system of occasional causes really doesn't involve (*ne suppose point en effect*) a perpetual miracle. Here it is said that it does not, because the system holds that God acts only according to general laws. I agree that he does, but in my view that is not enough to remove miracles. (GP IV: 520/WF 82)

³¹⁵ The text Bayle has in mind is probably *NS* § 13, where Leibniz charges the theory of occasional causes with invoking a *deus ex machina* for explaining natural events. See GP IV: 483.

³¹⁶ More specifically, Bayle is referring to 'the reciprocal dependence of body and mind'. But his point can be generalised so as to apply to all substances.

³¹⁷ See also OM V: 63, OM XII: 177–8.

Contrary to Bayle's supposition about Leibniz's supposition, Leibniz is then well aware that, for Malebranche, God's (purportedly) ordinary interventions are governed by general laws rather than by particular volitions. He insists, however, that occasionalism '*really*' involves perpetual miracles. Why?

The answer, as it seems to me, is (15): substances' natures *are* their intrinsically determining causal powers. This is how Leibniz continues his reply to Bayle's comment:

...Even if God produced them all the time, they would still be miracles, if the word is understood not in the popular sense, as rare and marvellous things, but philosophically, as something which exceeds the power of created things. It isn't sufficient to say that God has made a general law, for in addition to the decree there has also to be a natural means of carrying it out (*moyen naturel de l'exécuter*). It is necessary, that is, that what happens should be explicable (*expliquer*) in terms of the God-given nature of things. Natural laws are not so arbitrary and groundless as many think. If, for example, God decreed that all bodies has a tendency to move in circles with radii proportional to their size, we would have to say that there was some way of bringing this about by simpler laws. Otherwise we would have to admit that God brings it about miraculously, or at least by angels expressly charged with it, rather like those that used to be assigned to the celestial spheres. It would be the same if someone said that God has given natural and primitive gravity to bodies, by which they each tend to the centre of their globe without being pushed by other bodies, for in my view this system would need a perpetual miracle, or angelic help at least. (GP IV: 520/WF 82)³¹⁸

The first thing I should say about this passage is that it is not only, or even mainly, directed against the view that miracles are rare or infrequent events, as its first sentence might suggest. This is part of Leibniz's point, but not the whole of it. At any rate, it is not Leibniz's starting point. If it were, then Bayle would be right to think that Leibniz's objection is built upon a false supposition. For Malebranche is ready to acknowledge that miracles are not formally rare events: a 'genuine (*vrai*) miracle' is just an effect that is not produced as a consequence of God's general laws – the natural laws – regardless of whether it 'is usual or rare (*soit commun, ou qu'il soit rare*)' (OM VIII: 696).

Leibniz's point goes beyond any issue concerning competing definitions of miracle. In short, as I read it, it involves three complementary claims:

³¹⁸ Similar passages can be found at GP III: 122, GP IV: 587–8, GP IV: 594–5, GP VI: 240–1, GP VI: 326, NE 66. For more references, see Rutherford (1993: 144, n. 15).

(16) Malebranchian general laws are not genuine natural laws.

Why? Because

(17) genuine natural laws require genuine natures on which they are embedded,

and Malebranche's system lacks such natures. Why, more particularly? Because

(18) there cannot be genuine natures without substances' being endowed with genuine causal powers,

and Malebranche thinks that creatures are deprived of such powers.

While each of these propositions plays its part in Leibniz's objection, not all of them are equally fundamental. On one level – (16) and (17) – Leibniz's criticism stems from a disagreement about how the laws of nature are to be properly understood. For Malebranche, God's decree that things behave regularly in a certain way is sufficient for the general propositions expressing their behaviours to qualify as natural laws. Leibniz deems this insufficient: there must be in things 'a natural means of carrying out' God's decree, a God-given nature from which their behaviours and the general propositions that codify them can be extracted as intelligible, non-arbitrary behaviours and propositions.³¹⁹ On a more fundamental level, however – (18) – this disagreement about natural laws boils down to a deeper disagreement concerning what nature itself is: the God-given natures *are* the powers which spontaneously determine the regular behaviours of substances, powers which Malebranche so characteristically denied. In my opinion, this understating of natures as real causes is what explains Leibniz's belief in the intelligibility-giving quality that he affixes to natures: the operations and states of substances, as well as the laws embedded in them, are explicable by their natures because these natures causally determine those operations and states.³²⁰ It is thus from the view that natures are causes to the establishment of a requirement of intelligibility for natural laws that Leibniz's criticism is built.³²¹

³¹⁹ For a development of this point, see Rutherford (1993: 144–5).

³²⁰ If I understood him well, here I part company with Rutherford (1993), who sees the issue of the intelligibility-giving quality of nature and that of causal powers as 'two separate argumentative strategies'. As

And from here the thread of miracles is picked up, in two stages. First, since, as Malebranche sees things, creatures are causally inert beings, the general laws governing God's regular interventions cannot *really* be natural laws. Indeed, God's intervention must *really* be extraordinary or miraculous, for miracles, as (11) and (13) assert, are events that surpass the natures of created substances and natural laws, that is, their causal powers and the laws embedded in such powers. Secondly, rather belatedly and as an additional remark, the issue of rarity enters into play. Since Malebranche's general laws are not genuine laws of nature, the only way out of perpetual miracles would be to acknowledge that miracles are formally rare events. But this is a purely popular, unphilosophical way of understanding miracles, one which Malebranche himself would not countenance. And so there is really no way of escaping for Malebranche.³²²

The main point I am making – the nature/cause equation in Leibniz's discussions of miracles – is important for the purposes of my argument, so let me look at it from another angle. While shifting the focus from occasionalism to Newtonianism, Leibniz's reference to

far as the former goes, he suggests that Leibniz's 'point...is limited to the claim that, with regard to certain species or types of being, only certain effects can be conceived as following in an intelligible manner from their natures' (1993: 147). Thus, 'laws of nature are in the first place expressive...of the natures of *types* or *species* of being' (1993: 145, n. 18). If I am right, the nature of a substance is understood here as its specific essence. As argued above, however, this would commit Leibniz to the view that laws of nature are necessary and eternal truths – truths which substances cannot fail to accommodate on pain of *in-terminis* contradiction – since the specific essence of a substance is, for Leibniz, the source of such truths (see pp. 152 ff.). In turn, this would render miracles impossible, since they would entail violations of (metaphysically) necessary truths. But my remarks here hinge on the assumption that, on Rutherford's interpretation, nature is specific essence, which he would perhaps not accept.

³²¹ Consistent with this, Jolley (2005) proposes to read Leibniz's argument from perpetual miracles as stemming from discrepancies concerning the nature of scientific knowledge and its metaphysical foundations: while Leibniz favoured a caused-based conception of science, occasionalists espoused a law-based view – the latter being admittedly more in keeping with the prevailing Humean-style (and also Newtonian-style, as I shall argue in a moment) tendency in contemporary philosophy of science. I have nothing to say against this, except that, as it seems to me, Jolley goes a little too far in downplaying the relevance of natural laws to Leibniz's argument. For instance, he says that, 'for Leibniz, a miracle is not to be defined as a suspension of a law of nature; it is to be defined...as an event that exceeds the causal powers of created things' (2005: 124). This is true if by 'law of nature' is meant '*Malebranchean* law of nature'. However, Leibniz would, and indeed does, define miracles as suspensions of laws of nature (though not, as we know, of the exceptionless general law of order). So, instead of saying that Leibniz advances causal powers as an alternative to natural laws, I would say that he advances *his* laws of nature – which are grounded on causal powers – as an alternative to *Malebranchean* laws of nature – which are mere regularities having no root in such powers. There is thus no cause/law dichotomy in Leibniz's system, but rather an interpretation of laws as subordinated to causation.

³²² Or perhaps there is, one might reply. For Malebranche would take issue with Leibniz's claim that, in acting in accordance with general laws, his God is acting in an arbitrary, merely conventional manner, even if one were to concede that there are no natures in the Leibnizian sense. See e.g. OM V: 12–3 and Rutherford's comments (1993: 145, n. 17). But, again, Leibniz would counterattack. See e.g. GP VI: 252 and Rutherford's comments (1993: 154 ff.).

gravity in the last sentence of his reply to Bayle is interesting.³²³ Superficially, it might seem odd for Leibniz's to put occasionalists and Newtonians in the same group. For Newton, bodies 'act upon one another by the attractions of gravity, magnetism, and electricity' (*Opticks*, q. 31/LC 174). For Malebranche, 'it is a contradiction...for one body to be able to move another' (OM XII: 160/JS 115). Furthermore, Samuel Clarke – Leibniz's most permanent Newtonian interlocutor – was keen on distancing himself from Malebranche, whom he criticised with regard to a number of points central to the theory of occasional causes.³²⁴

But Leibniz has reasons to believe that his objection from miracles applies to occasionalism and Newtonianism alike. The question, again, is why.

One answer could be that Leibniz's rejection of gravity on the ground that it entails perpetual miracles is a direct consequence of his denial of action at a distance through empty space.³²⁵ On this account, the Leibniz behind the anti-Newtonian argument from miracles is Leibniz the mechanist, for whom any satisfactory account of planetary motion and bodily behaviour must be cashed out in terms of the communication of motion through collision. That this is a salient strand in Leibniz's rejection of universal gravitation I shall not counter.³²⁶ But I doubt it is the only one. If it were, we would have to conclude that Leibniz's criticism is rather weak or, at any rate, very circumscribed. For, first of all, whether Newton conceived of attractive forces as propagating themselves through void space is a moot point: while in some passages he appears to think so, in others he seems to recoil. In the *Opticks*, for example, after saying that 'to make way for the regular and

³²³ More comprehensive treatments of Leibniz's polemical encounter with Newtonians can be found in Koyré (1965), Parkinson (1969: 93–6), Calinger (1969), and Vailati (1995). My concern in what follows is only with a few points which I think relevant to the relationship between nature and cause.

³²⁴ For example, Clarke rejected the notion of continual creation, which is the key premise of one of the two main arguments Malebranche gives for his banishing activity from the finite realm: 'God discern things, by being present to and in the substances of things themselves. Not by producing them continually; for he rests now from his work of creation' ('Forth Reply', § 30; GP VII: 386/LC 51). For more on Clarke on Malebranche, see Vailati (1995: 568, n. 13). On the doctrine of continual creation as a premise of Malebranche's argument for occasionalism, see chapter 1 (pp. 31–2).

³²⁵ This is, for example, H. G. Alexander's view in his edition of the Leibniz-Clarke correspondence. See LC, xviii.

³²⁶ Passages in which Leibniz criticises the idea of action at a distance through empty space (or '*sans moyen*') on mechanical grounds include Leibniz's 'Fourth paper', § 45 (GP VII: 377), 'Fifth Paper', § 118 (GP VII: 418), *Antibarbarus Physicus* (GP VII: 338), among others. It is also what Leibniz seems to have in mind in the quoted passage from the reply to Bayle.

lasting motions of the planets and comets, it is necessary to empty the heavens from all matter', Newton qualifies his position by adding:

[E]xcept perhaps some very thin vapours, steams or effluvia, arising from the atmosphere of the earth, and from such an exceedingly rare *ethereal medium* as was describe above [*sc.* qq. 18–24]. (*Opticks*, q. 28/LC 172; my emphasis)³²⁷

Moreover, even assuming that Newton himself did conceive of gravity as immediate action at a distance, many of his most distinguished disciples did not: Euler, Voltaire, Maupertuis and Clarke himself all rejected the possibility of such action, espousing instead action through (direct and indirect) contact.³²⁸ But, of course, none of these Newtonian luminaries rejected universal gravitation. This suggests that the possibility of universal gravitation does not depend on its being exercised immediately at a distance in any relevant sense. Are we then to conclude that Leibniz anti-Newtonian argument from miracles falls completely to ground on account of an emendation on the part of Newton's followers?

The core of Leibniz's argument lies elsewhere. Consider this, coming from Clarke's celebrated Boyle Lectures:³²⁹

[Since] Matter is utterly incapable of obeying any laws, the very original Laws of Motion themselves cannot continue to take Place, but by some Superiour to Matter, continually exerting on it a certain Force or Power, according to such certain and determinate Laws. (*Works*, II: 601; quoted in Vailati [1995: 568])

And elsewhere, Clarke writes:

All things *Done* in the World, are done either immediately by God himself, or by *created Intelligent Beings*: *Matter* being evidently not at all capable of any *Laws or Powers* whatsoever...So that all those things which we commonly say are Effects of the *Natural*

³²⁷ As Heimann/McGuire (1971) argue, Newton's reference to ether in this text appears to be motivated by no other reason than his interest in distancing himself from the problematic idea of action at a distance through empty space. See also Edwards (2000: 103). The postulation of ether as a cosmic medium is also part of Leibniz's account of planetary motion. See GM III: 189–93.

³²⁸ For Euler's case, see Schönfeld (2000: 152). On Voltaire and Maupertuis, see Arana (1988: 342). On Clarke, see 'Fourth Reply', § 45: 'That one body should attract another without any intermediate means, is indeed not a miracle, but a *contradiction*' (GP VII: 388/LC 53). See also GP VII: 439. That there is action at a distance is also rejected by Hume. See *Treatise*, 54. Interestingly, an exception to this trend is Kant, who embraced action at a distance. See Ak I: 415, Ak XVIII: 46 and, for some comments, Friedman (1992: 1).

³²⁹ Leibniz knew and probably read Clarke's lectures. See Vailati (1995: 583, n. 42).

Powers of Matter, and Laws of Motion; of Gravitation, Attraction, or the like; are indeed (if we will speak strictly and properly) the Effects of God's acting upon matter continually and at every moment, either immediately by himself, or mediately by some created Intelligent Beings. The Course of Nature truly and properly speaking is nothing else but the Will of God producing certain effects in a continued, regular, constant and uniform Manner which...being in any moment perfectly Arbitrary, is easy to be altered at any time. (Works, II: 697–8; quoted in Vailati [1995: 566])

Similar passages occur in Clarke's correspondence with Leibniz, too:

The terms Nature, and Power of nature, and Course of Nature, and the like, are nothing but empty words, and signify merely that a thing usually or frequently comes to pass. ('Fifth Reply', § 107–9; GP VII: 435–6/LC 114)

There [are] no Powers of Nature independent upon God. ('Second Reply', § 9; GP VII: 361/LC 23)

Confronted with passages such as these, it is highly implausible Leibniz could have failed to detect the glaring similarities between Clarke's position and that of the occasionalists. Three chief claims Malebranche makes are also made by Clarke: matter is powerless³³⁰, natural means regular (usual, frequent), and laws of nature depend on God's 'continued, regular, constant and uniform' will.³³¹ Furthermore, one chief claim Leibniz thinks is entailed by Malebranche's position is explicitly endorsed by Clarke: insofar as they are based on God's will, the effects produced by God and the laws governing them are purely arbitrary. Given this, I think it is reasonable to believe that, in charging both Newtonianism and occasionalism with introducing perpetual miracles, Leibniz is not simply using one objection to deal with two unrelated targets. Occasionalism and Newtonianism are liable to the same charge for the very same reason: they fail to acknowledge causal powers in things and hence lack an appropriate notion of nature and natural law. Since matter, as Clarke says, is 'not at all capable of any *Laws or Powers*

³³⁰ To be precise, Clarke does believe there is one type of power ascribable to matter, namely inertia. But this is a purely negative power, not an active one. See Vailati (1995: 568).

³³¹ Newton would probably have agreed with most of this, for he insisted to his readers not to 'take gravity as an essential property of matter' and spoke of God as 'being able by his will to move the bodies within his boundless uniform sensorium'. See Newton's 1693 letter to Bentley (LC xix) and *Opticks*, q. 31 (LC 181). For the role of divine will, see also *Opticks*, q. 31, where the function of 'conserving and recruiting motion' is said to be performed by some 'active principles or [by] the dictates of a will (*ex imperio voluntatis*)' (LC 178).

whatsoever', there is no God-given nature in things from which their regular behaviours – their gravitating towards one another, in particular – can be extracted as intelligible operations. Consequently, despite their inductively established regularity, Newtonian laws of nature are not genuine laws of nature. In a passage which clearly resembles his criticism of the Malebranchean account of natural law, Leibniz writes:

But it [*sc.* attraction] is regular, (says the author [*sc.* Clarke]), it is constant, and consequently natural. It cannot be regular without being reasonable; nor natural, unless it can be explained by the nature of creatures. (GP VII: 418 /LC 94)³³²

Now, miracles, as we know, are events which surpass the casual powers of creatures (their natures) and the general propositions grounded on them (the laws of nature). Hence, Newtonian attraction, whether it is exercised immediately at a distance or mechanically through some kind of ethereal medium, entails God's perpetual miraculous intervention. After this, I admit, there comes a difference. Unlike Malebranche, Clarke does define miracles in terms of rarity.³³³ But this makes no real difference in Leibniz's eyes. For that is a bad, philosophically unacceptable definition of miracles.³³⁴

5. Objections and replies

This closes my arguments for (15) and thereby for the thesis of Limited Spontaneity. The argument I have offered may, I hope, seem reasonably coherent. Yet, I am pretty sure, the

³³² For a similar passage, see Leibniz's letter to Conti of November/December 1715 (LC 184). See also Leibniz's 1690 letter to Huygens, where he implies that the law of universal gravitation, for which Newton 'didn't think to give an explanation', is based on 'the decisions of the author of nature'. He deems this as 'insufficiently philosophical', unlike his own account of planetary motion in terms of 'some kind of vortex and common matter' (ether) (GM VI: 190/AG 309).

³³³ See Clarke's 'Second Reply', § 12 (GP VII: 362), 'Third Reply', § 17 (GP VII: 371); 'Fourth Reply', § 43 (GP VII: 388). Newton agrees. See his 26 February 1716 letter to Conti (LC 187).

³³⁴ See 'Third Paper', § 17 (GP VII: 366); Letter to Conti (LC 187); GP IV: 484. At this point, Newtonians are likely to resort to their *hypotheses non fingo*: gravity is a 'manifest quality' the causes of which experimental physics can, and should, leave aside. See Newton's 26 February 1716 letter to Conti (LC 187). For Clarke's take on this, see 'Fifth Reply', § 121 (GP VII: 439). However, I think Leibniz would have regarded this reply as an example of 'barbaric physics'. Thus, in *Antibarbarus Physicus*, he criticises 'certain people' who, 'having assumed the universal gravitation of the planets', think 'there is nothing left to explain' simply because their assumption can explain some astronomical laws (GP VII: 338–9/AG 314). See also Leibniz's letter to Conti of 9 April 1716 (LC 188).

thesis itself will be resisted. So let me address some objections, beginning with the most obvious of all.

A. *Logicist texts*. As mentioned earlier, there are important texts in which Leibniz suggests that spontaneity is a consequence of his complete-concept theory of substance. Since that theory claims every true predicate of a substance – whether natural or miraculous – to be included in its concept, it seems to follow from this that ‘miracles are “built in” to the causal sequence of monads’, as all other predicates are (Cox 2002: 202). This would undermine Limited Spontaneity. How should we go about in interpreting these ‘logicist’ texts?

I think we should begin by paying attention to the context in which the texts in question occur. What I have in mind is this. When Leibniz suggests that spontaneity is a consequence of his complete-concept theory, he typically has a *third* doctrine in mind, namely that substances do not interact causally. For instance, in a passage from *PL-M* which both Adams (1985: 264) and Kulstad (1993b: 493) take to pose serious difficulties for a construal of spontaneity which excludes miracles, we read:

- [a] Strictly speaking, one can say that no created substance exerts a metaphysical action or influx on any other thing. For...we have already shown that from the notion of each and every thing (*ex uniuscujusque rei notione*) follows all of its future states. (A VI: 4: 1647/AG 33)³³⁵

I think this is relevant.

We saw in chapter 2 that when Leibniz says that substances do not interact causally – or, more generally, that there are no extrinsic denominations in substances – his claim is always restricted to relations between *finite* substances: no finite substance interacts causally with any other finite substance, though all finite substances relate causally to God, the infinite substance. This makes room for the following hypothesis: the spontaneity thesis ranges over those states, and only those states, whose explanation by reference to external causes is forbidden by the no-external-causation thesis, i.e. states depending *prima facie* on external finite substances. That is, extensionally considered, the spontaneity thesis is the

³³⁵ See also A VI, 4: 1551; A II, 2: 53.

positive counterpart of the no-external-causation thesis. And just as finite substances' causal dependence on the infinite external substance is not affected by the no-external-causation thesis, so the infinite external substance's miraculous intervention is not affected by the spontaneity thesis.

There is an important objection that can be raised against this hypothesis, but let me try to firm the hypothesis itself up a bit before addressing it. Consider:

- [b] [A]nything which occurs in what is strictly speaking a substance must be a case of "action" in the metaphysically rigorous sense of something which occurs in the substance spontaneously, arising out of its own depths; *for* no created substance can have an influence upon any other, so that everything comes to a substance from itself. (NE 210; my emphasis)
- [c] And *because (quia)* there is no means by which one simple substance could influence another, it *follows (sequitur)* that every simple substance is spontaneous, or the one and only source of its own modifications. (C14/MP 175, my emphasis)

As he does in [a], in these passages Leibniz predicates the spontaneity thesis alongside the no-external-causation thesis. But there is a difference. Conspicuously, the *order of derivation* is different. While in [a] the no-external-causation thesis is presented as a consequence of the spontaneity thesis, in [b] and [c] the inference is inverted: the latter is said to be a consequence of the former. This logically implies that the spontaneity thesis *cannot* reach beyond the domain in which the no-external-causation thesis applies. And the domain in which that thesis applies does not include, as we have seen, the 'vertical' relation between finite substances and the infinite substance. Hence, the possibility of God's miraculous intervention is not affected by the spontaneity thesis.

If this is not convincing enough, think of this passage from *Mon.* § 11:

- [d] The natural (*naturel*) changes in monads come from an internal principle, since (*puisque*) an external cause cannot influence their interior. (GP VI: 608/AG 214; my emphasis)

Again, as in [b] and [c], in this text the inference goes from the no-external-causation thesis to the spontaneity thesis. What is the conclusion? Well, precisely the one demanded

by the inferential pattern Leibniz is following: the *natural* states of monads arise from an internal principle.³³⁶

Let us now face the objection to which I have alluded. When restricting the no-external-causation thesis to relations between finite substances – so the objection goes – Leibniz’s goal is to allow room for divine *ordinary* concurrence or conservation: *that* is the ‘window’, and no other, Leibniz wants to leave open in finite substances. This is, for instance, what we find in *DM* § 14, where Leibniz qualifies his no-external-causation thesis by saying that, ‘first of all, it is obvious that substances depend on God, who preserves (*conserve*) them and produces them continuously by a kind of emanation’ (A VI, 4: 1549/AG 46). But ordinary concurrence or conservation is not the same as extraordinary concurrence or miraculous intervention.

I do not think this is a decisive objection against the view I am advancing, for two reasons. First, while it is true that in texts such as *DM* § 14 Leibniz’s aim – or at least his explicit aim – is to create space for conservation rather than miraculous intervention, there are other texts in which he has a broader aim in view.³³⁷ In a letter to Des Bosses, Leibniz writes:

[I]t is in the very nature of substance that the present is pregnant with the future, and that everything can be understood from one thing, *at least unless God intervene with a miracle (saltem ni Deus miraculo intercedat)*. (GP II: 503/LR 349)

Here Leibniz is clearly allowing room for extraordinary intervention. And the immediate context in which this remark occurs is precisely the one I am urging to pay attention to: Leibniz’s rejection of ‘a system...in which monads act mutually on each other’, i.e. the no-external-causation thesis (GP II: 503/LR 349).³³⁸

Secondly: it is true that Leibniz distinguished between extraordinary concurrence or miraculous intervention on the one hand, and ordinary concurrence or conservation on the

³³⁶ See GP I: 382 (to Foucher, WF 52), GP IV: 579 (to Lamy, WF 154), GP VI: 609 (*Mon.* § 22), A II, 2: 53 (to Arnauld, LA 51–2), where Leibniz also uses the adjective ‘natural’ in formulations of the spontaneity thesis.

³³⁷ Moreover, recall that two sections later – i.e. in § 16 – and seven sections earlier – i.e. in § 7 – Leibniz deals with the issue of extraordinary concurrence explicitly. So maybe Leibniz has this issue in mind in *DM* § 14 too, even if he is not explicit about it.

³³⁸ This text does not explicitly mention spontaneity, but the claim that ‘it is in the very nature of substance that the present is pregnant with the future’ clearly resembles the idea that substances’ states are spontaneous.

other. However, it seems to me that this distinction is not one between miraculous and non-miraculous divine action. That is, conservation or ordinary concurrence is every bit as miraculous as extraordinary concurrence or miraculous intervention. Consider the following. In a passage we have already encountered, Leibniz tells us that ‘Creation, Incarnation, and some other actions of God...are truly miracles’, the reason for this being that they ‘exceed all the force of creatures’ (GP VI: 265/H 280). But Leibniz also tells us that conservation is ‘continued *creation*’ (GP VI: 119/H 139; my emphasis).³³⁹ If creation exceeds all the power of creatures, it follows from this that conservation or ordinary concurrence, insofar as it is continued creation, exceeds all the power of creatures. Hence, it is a miracle.³⁴⁰ This being the case, the objection that Leibniz’s goal in restricting the no-external-causation thesis in the specified sense is to make room for God’s ordinary concurrence or conservation does not count as evidence against Limited Spontaneity: it counts as evidence *for* it. This leads us to a second objection to Limited Spontaneity.

B. First- and second-rank miracles. It is well known that Leibniz distinguished between two types of miracles, those belonging to a ‘highest order’ (*du premier rang*) and those belonging to an ‘inferior order’ (*ordre inferior*) (GP VII: 418, GP VI: 265). Creation, annihilation, and Incarnation belong to the first category, whereas the turning of water into wine at Cana is mentioned by Leibniz as an example of a miracle of the inferior type (GP VI: 265). Some scholars, notably Adams (1994: 94), have taken this distinction to speak against the view that Leibnizian miracles, all of them, surpass the causal powers of creatures: while first-rank miracles do, second-rank miracles do not. Admittedly, this would not completely undermine Limited Spontaneity, for there will continue to be at least some

³³⁹ See also A VI, 4: 1549; A VI, 4: 1596; GP I: 240; GP IV: 440; C 22; DS II: 410.

³⁴⁰ On this, see also *Theodicy* § 385, where Leibniz says that ‘the creature depends upon [divine operation] *no less after* the time of its beginning than when it *first* begins’ (GP VI: 343/H 355; my emphasis). See also *CDa* §§ 10–12 (GP VI: 440) and, for comments, Adams (1994: 95–8). This raises a series of thorny issues that I am not in a position to address in this dissertation. In short, if conservation is as miraculous as initial creation, doesn’t this render all the states of substances miraculous? How can Leibniz save substances’ spontaneity and the autonomy of their intrinsic activity against the occasionalist – and hence, by his own lights, Spinozistic – threat? The only thing I shall mention about this problem is that, as it seems to me, it is not specific to a defence of Limited Spontaneity: it arises in connection with any interpretation of Leibnizian spontaneity one might wish to pursue. Indeed, I would even say that the problem exerts pressure not only at the juncture of *Leibniz’s* metaphysics and his philosophical theology: it affects any philosophy which wants to safeguard the autonomy of nature and escape both occasionalism and ‘mere’ conservationism. The relevant literature on this topic has been quoted in chapter 1, section 3.3 (n. 54).

(though few) miracles in the strict sense of events that exceed the powers of creatures. But it would seriously detract from its interest.

I have not been able to persuade myself that Leibniz's distinction between these two types of miracles is relevant to my Limited Spontaneity. For I do not believe it is quite right to say that, for Leibniz, second-rank miracles do not exceed the power of creatures without making an important clarification. It is true that, as Leibniz characterises them, there is *a sense* in which second-rank miracles can be said to differ from first-rank miracles in that the former do not surpass the powers of creatures. A crucial question, however, is exactly *which* creatures' powers are said not to be surpassed when a miracle of the second-rank type occurs. And here Leibniz is quite clear: those of angels (GP VII: 418, GP III: 191, GP VI: 265). So, first-rank miracles do not differ from second-rank miracles in that the latter do not surpass the power of the creature *to which the miracle occurs* whereas the former do: in both cases the force of *that* creature is surpassed. Leibniz's point, rather, is that, unlike first-rank miracles, second-rank miracles do not surpass the power of *any* creature: for angels are creatures. True, the affirmation of the possibility of second-rank miracles might bring with it its own problems. But these problems are not Limited Spontaneity's problems: whatever its variety, a miracle always exceeds the power of the creature *to which it occurs*. And this is all that Limited Spontaneity requires.³⁴¹

C. Limited Spontaneity and sufficient reason. Leibniz's conception of substances as the spontaneous source of their own states is connected with his view that there must be a

³⁴¹ Of course, Adams knows that second-rank miracles are performed by angels, but for some reason which is unclear to me he takes the first-/second-rank miracles distinction as evidence that states brought about by angels would ultimately be spontaneous states. Although he is not explicit about this, maybe what he has in mind is that, *pace* Leibniz's distinction, second-rank miracles are simply impossible within Leibniz's system: angels are finite beings or creatures, and so the possibility of second-rank miracles entails the possibility of external causation at the *finite-finite* level, which Leibniz disavows. I cannot give this the attention it merits here, but I would like to mention two points. First, as Leibniz himself reports (GP VI: 265), that there are miracles performed by angels is also *Malebranche's* opinion, and for Malebranche there is no external causation at the finite level either. So, if we are not going to charge Leibniz *and* Malebranche – and I think we should not – with holding an opinion which flatly contradicts some of their most characteristic views, it seems that the conclusion to be extracted from all this is that the case of angelic causation should have been regarded by them as a very peculiar case of finite-finite causation. This brings me to the second point. Leibniz's formulation of angelic causation in the case of second-rank miracles is subtle: what he says is not quite that second-rank miracles are produced *by angels*. Rather, he says they are produced *by God 'through' angels*: 'God brings about [the miracle] *through (par)* the ministry of invisible substances' (GP VI: 265/H 280; my emphasis). So, contrary to initial appearances, maybe we should just stop saying that, for Leibniz, second-rank miracles are the product of angelic action.

sufficient reason for every state. Since Limited Spontaneity claims some states to be non-spontaneous, it might seem to violate the principle of sufficient reason.

I think there is nothing in Limited Spontaneity which entails such a violation. Particularly, it seems to me that Leibniz's conception of sufficient reason is wide enough to accommodate God's miraculous intervention, provided miracles are understood as *Leibniz* understood them. For, on Leibniz's view, as I have argued, miracles (in the strictest sense) are events that exceed things' natures (i.e. their determining powers) and the laws of nature while remaining (i) within substances' complete concepts and (ii) in conformity with the general law of order. And this is enough for the demands of the principle of sufficient reason to be met.³⁴²

Beginning with (i), note first that in some writings Leibniz says that the principle of sufficient reason is a corollary of the containment theory of truth (A II, 2: 80). Now, the complete-concept theory of substance is a consequence of Leibniz's containment theory of truth (A VI, 4: 1540). This suggests that the inclusion of miracles in substances' complete concepts is enough to accommodate the strictures of Leibniz's conception of sufficient reason. Similar considerations hold for (ii). For if miracles are in conformity with the general law of order, they *must* have a reason: the maximization of order *is* precisely what drives divine action, what provides God with a sufficient reason to act.³⁴³ In this regard, it is important to be emphatic that when God produces a Leibnizian miracle, he does not 'adjust' anything. Nor does he have to 'mend' the course of the universe after producing it. This is a key point where Leibniz and Malebranche (as Leibniz reads him) part ways.³⁴⁴ Since, for Malebranche, God's miraculous actions are exceptions to the general order, the production of a miracle demands that God departs from his general volitions in order to make room for a particular volition which is in *conflict* with them. By contrast, Leibniz's

³⁴² As we saw, Leibniz also characterises miracles as events whose reasons 'our mind (or even any created mind) cannot comprehend' (GP VI: 64/H 88). This non-strict account of miracles poses no threat to their having a sufficient reason: that something has a sufficient reason does not mean that that reason must be known to *created* minds. See *Mon.* § 32 (GP VI: 612).

³⁴³ More precisely, what drives divine action is the maximization of perfection and harmony, whose ingredients are variety and order. See Rutherford (1995: 22–45).

³⁴⁴ And also Leibniz and the Newtonians (as Leibniz reads them): 'The machine of God's making is so imperfect, according to these gentlemen [the Newtonians], that he is obliged to clean it now and then by an extraordinary concurrence, and even to mend it, as a clockmaker mends his work; who must consequently be so much the more unskilful a workman, as he is oftener obliged to mend his work and to it right' (GP VII: 352/LC 12).

God always acts in accordance with his primitive master plan and the dictates of his general will, even when he performs a miracle:

As God can do nothing without reasons, even when he acts miraculously, it follows that he has no will about individual events but what results from some general truth or will. Thus I would say that God never has a *particular will* such as this Father [sc. Malebranche] implies, that is to say, a *particular primitive will*. (GP VI: 240–1/H 256–7)

And note that there is nothing here which prevents Leibniz from thinking that miracles are performed by God himself. This is how he replies to the objection that ‘if all is ordered [from the beginning], God cannot perform miracles’ in an earlier section of the *Theodicy*:

But one must bear in mind that the miracles which happen in the world were also enfolded and represented as possible in the same world considered in the state of mere possibility; and God, who has since performed them, when he chose this world had even then decreed *to perform them*. (GP VI: 132/H 152; my emphasis)

Thus, the idea that all is ordered does not rule out the idea that God can perform miracles. Rather, it rules out the idea that God’s performance of a miracle can be in conflict with the order he has pre-determined for all things from the beginning.

Since the maximization of order is what provides God with a *sufficient* reason to act, the order in which there are miracles, in the precise quantity exhibited in this world, must perforce be *better* than, and *preferable* to, an order in which there are no miracles or, more precisely, one in which there are fewer/more miracles than those occurring in this world. On the face of it, this might seem to run against Leibniz’s view that order requires simplicity of laws. For wouldn’t a world without miracles be simpler in laws than one with miracles? However, it is interesting that in more than one passage Leibniz explicitly says that when God performs a miracle, he acts for a reason which is ‘*superior (superieur)* to that of Nature’ (GP VI, 241/H 257) and ‘*stronger (plus forte)* than the one which moved him to use [subordinate] maxims’ (A VI, 4: 1539/AG 40). What exactly these superior and stronger reasons are Leibniz does not tell us. Yet the suggestion is clearly made that a world, say W, in which a miracle, say M, occurs is better than a world, say W*, which is exactly like W except for the fact that M does not occur in W*. This means that Limited Spontaneity is not only consistent with Leibniz’s commitment to the ubiquity of the

principle of sufficient reason: it is also consistent with the principle of the best, which is the specific form of the principle of sufficient reason as applied to this contingent world in which we live.³⁴⁵ This actual world is the best possible world, the one exemplifying the greatest possible variety and order, i.e. the greatest possible *harmony*, and it does include miracles. This reference to harmony brings us to the last – and perhaps the most important – objection to Limited Spontaneity I wish to address.

D. *Limited Spontaneity and pre-established harmony (against Kulstad)*. The spontaneity of substances is a key component, if not *the* key component, of Leibniz's pre-established harmony (that is the reason I have dedicated so many pages to discussing it in this study). But Limited Spontaneity claims some states, namely miraculous states, to be beyond spontaneity. This seems to imply that miraculous states are beyond pre-established harmony. Consequently, pre-established harmony is not universal: it holds only for natural states. But this contradicts Leibniz's view that 'all things in the universe are in mutual harmony' (*CDA*, § 41; GP VI: 445). In other words, Limited Spontaneity turns Leibniz's pre-established harmony into what Mark Kulstad has called 'Limited Pre-established Harmony', the thesis that 'God has given to each substance a nature capable of generating a sequence of states, without any need of interaction among creatures to assist in the generation; and the sequence so generated by created substances will, miraculous interventions aside, harmonise perfectly....Thus the nature can guarantee harmony only for non-miraculous states' (1993b: 480).

I agree of course that all things in the universe are in mutual harmony, and actually in mutual pre-established harmony.³⁴⁶ However, I disagree that Limited Spontaneity turns Leibniz's pre-established harmony into Kulstadian Limited Pre-established Harmony. That is, I think that the spontaneity of substances is restricted to their natural states *and* that the pre-established harmony applies universally to all states, natural as well as miraculous. At the same time, the spontaneity of substances is integral to pre-established harmony. How could this be?

³⁴⁵ For the principle of the best as a specific form of the principle of sufficient reason, see Parkinson's introduction to DSR (DSR: xxv).

³⁴⁶ See chapter 2.

The basis for the answer lies in a distinction I have already introduced. In chapter 1, section 3.3, I argued that pre-established harmony can be said to be pre-established in two senses. In one sense, it is pre-established because each (non-initial, natural) state of a substance has some preceding state of that substance as its real cause. This makes for what I will call a ‘natural *intra*-systemic pre-established harmony’ or natural pre-established harmony between *things* (or between their states). As I see it, Leibniz allows for more than one type of natural intra-systemic pre-established harmony. Thus, there is an intra-systemic pre-established harmony between the soul and the body, and there is also a broader intra-systemic pre-established harmony between all substances. Referring to the former, Leibniz writes in an undated letter to Jaquelot:

[A]ccording to me, everything that happens *normally* (*ordinairement*) in the universe is natural, and happens as a consequence of the *nature* of things, so that one of these substances adjusts itself to the other by its own *nature*. (GP III: 467–8/WF 178; my emphasis)³⁴⁷

Similarly formulated, the idea is found in *Mon.* § 78, though this time generalised so as to cover both soul–body relations and the relations between all substances:

These principles have given me a way of *naturally* (*naturellement*) explaining the union, or rather the conformity of the soul and the organic body. The soul follows its own laws and the body also follows its own; and they agree in virtue of the harmony pre-established between *all* substances. (GP VI: 620/AG 223; my emphasis)³⁴⁸

In both cases, however, the basic claim is that substances are members of a system – the natural system – and, as such, each of them adjusts itself to the succession of states of the others by following what has been pre-ordained in its own nature.

³⁴⁷ For simplicity’s sake, here I will be assuming – as Leibniz himself does in this passage – that bodies can be referred to as ‘substances’. More rigorously, at least from a certain period onwards, Leibniz would perhaps say that the soul-body pre-established harmony is a pre-established harmony between the soul/dominant monad and the substances/souls/subordinated monads which constitute the organic body. In any case, the fact remains that this type of harmony is intra-systemic or between ‘things’. (From a different point of view, however, the soul-body pre-established harmony can also be said to be a case of *inter*-systemic harmony, namely one between the (natural) kingdom of efficient causes and the (natural) kingdom of final causes. See *Mon.* § 79 (GP VI: 620) and below).

³⁴⁸ See also Leibniz’s letter to Lelong of 5 February 1712, where he says that his ‘pre-established harmony is demonstrated in the order of nature (*dans l’ordre de la nature*)’ (Robinet 421).

Nevertheless, looked, as it were, from God's standpoint, we saw that pre-established harmony can also be said to be pre-established in the sense that it is predetermined by God *ab initio*: it 'arises through a consensus derived from divine pre-formation (*a divina praeformatione*)' (GP IV: 510; cf. GP VI: 356–7). Now, this sense in which pre-established is predicated is not of course detached from the natural intra-systemic pre-established harmony: the latter is ultimately grounded on, or derives from, divine pre-formation, for it is ultimately God who creates things in such a way that each of them adjusts itself to the others while following its own nature. Understood in the second sense, however, I think that Leibniz's pre-established harmony accounts for *more* than the natural intra-systemic pre-established harmonies. In particular, it also accounts for *inter*-systemic pre-established harmonies or pre-established harmonies between *systems*. I use the plural here because, as in the case of the natural intra-systemic harmonies, there is more than one pre-established harmony in the inter-systemic sense. First, there is a harmony between the two kingdoms – or, better, sub-kingdoms – of efficient causes and final causes. This makes for a pre-established harmony which, while inter- rather than intra-systemic, is as natural as the intra-systemic harmonies we have met: it holds for two natural kingdoms or systems. Wider than it, however, there is also an inter-systemic harmony which *transcends* nature. This is the inter-systemic harmony between the kingdom of nature and the *kingdom of grace*:

Since earlier we established a perfect pre-established harmony between two natural kingdoms (*deux Regnes Naturels*), the one of efficient causes, the other of final causes, we ought to note here yet another harmony between the physical kingdom of nature and the moral kingdom of grace. (GP VI: 622/AG 224; *Mon.* § 87)³⁴⁹

And this type of inter-systemic harmony is, I propose, very relevant to the issue at hand. For miracles are, so to speak, 'members' of the kingdom of grace: 'I hold that when God preforms a miracle, he does not do so in order to supply the wants of nature, but those of grace', as Leibniz says to Clarke (GP VII: 352/LC 12).³⁵⁰ If so, and if there is an inter-systemic pre-established harmony between the kingdom of nature and that of grace, then Limited Spontaneity does not detract from the universality of pre-established harmony. In a

³⁴⁹ Leibniz's reference to the pre-established harmony 'established earlier' is probably to *Mon.* § 79 (GP VI: 620). See also GP VI: 605.

³⁵⁰ See also GP III: 291: '...par grace, c'est dire par miracle'.

sense, Kulstad is right to think that Limited Spontaneity entails his Limited Pre-established Harmony, namely in the sense of the natural intra-systemic pre-established harmonies between mind and body and between all things. It may even be true that my Limited Spontaneity entails Kulstad's Limited Pre-established Harmony in the further sense of the natural inter-systemic pre-established harmony between the natural kingdoms of efficient and final causes. Yet Kulstad's Limited Pre-established Harmony is not all there is to Leibniz's pre-established harmony, which also includes a beyond-nature inter-systemic harmony between the kingdom of nature and that of grace.

Recapitulation and Transition to Chapter 5

Let us be clear about where we are coming from and where we are heading.

A long-standing piece of Leibnizian lore claims Leibniz's pre-established harmony to be a logical consequence of his complete-concept theory of substance and the analytical conception of truth that sustains it. In chapters 2 to 4, I have offered and discussed in detail a unitary argument which, taken as a whole, demonstrates that such a claim is not right. I have argued that the complete-concept theory, in conjunction with considerations about truth – what in the title of chapter 2 I have jointly referred to as the 'logic' of pre-established harmony – can be seen to provide us with a satisfactory explanation of the idea of universal relatedness and the denial of external dependence, components (C1) and (C4) of pre-established harmony in chapter 1. Yet it goes no further than that. As far as (C6) – perception – and (C5) – spontaneity – is concerned, the pre-established harmony is largely shaped by Leibniz's theological doctrines. In order to get at the former, more specifically, Leibniz resorts to his view that creation consists in God's continuously emanating limited instances of his absolute attributes, among which there is infinite perception (chapter 3). With regard to (C5), I have defended the view that the spontaneity of substances must be relocated from substances' complete concepts to their complete natures, a move which underpins Leibniz's strategy for preserving miracles in a world of complete concepts and inexorable order (chapter 4). I have further argued that the restriction of the scope of substances' spontaneity which follows from such a relocation poses no real threat to the universality of pre-established harmony, provided we distinguish between natural intra- and

inter-systemic pre-established harmonies, on the one hand, and a beyond-nature inter-systemic pre-established harmony between the kingdom of nature and the kingdom of grace, on the other. As has been presented so far, we can then say that Leibniz's pre-established harmony trades on two distinct strands, namely the logical and the theological.

The following, final chapter sketches the outline of an interpretation of pre-established harmony which incorporates views I have defended in the previous chapters while bringing important bits of Leibniz's natural philosophical reflections to the fore. The central notion on which my interpretation is built is that of an aggregate. Considerations of aggregation pervade Leibniz's anti-Cartesian project of laying the foundations for the (accidental) unity and reality of natural bodies, but I think they are also integral to Leibniz's articulation of pre-established harmony as an account of the (accidental) unity and reality of the world as a whole. Generally put, the view I shall put forward is that, understood as an explanation of the unity of all substances, the theory of pre-established harmony can be seen as an extension of, or conceived by analogy with, Leibniz's theory of unity by aggregation: the world is a type of aggregate for Leibniz, and, therefore, the mechanism by which the world is unified is essentially the same as that by which aggregates are unified. Further, I shall propose that what is distinctive of the world as a particular type of aggregate is that the principle of its unity and reality is the perceiving power of the infinite substance. Taken in conjunction with the results obtained in chapters 2 to 4, the general picture of pre-established harmony that will emerge is thus one in which Leibniz's logical doctrines, his natural philosophy and his philosophical theology all converge into a rich explanation of the unity of the world as a type of aggregate.

CHAPTER 5

Aggregation, God and the Unity of the World: Pre-established Harmony Revisited

1. Introduction

It is well known that Leibniz resorted to considerations of aggregation in order to show that there must be something wrong with the Cartesian view of body as purely extended matter. Yet I think that such considerations are also at the basis of Leibniz's account of the unity and reality of the world through his theory of pre-established harmony. This final chapter has two overarching aims. The first is to make the case for pre-established harmony as an extension of Leibniz's conception of the unity and reality of aggregates. This is not how the pre-established harmony is usually presented. Nevertheless, that the world is an aggregate, collection or assemblage of finite substances is a claim that Leibniz repeatedly and explicitly made in more than one text.³⁵¹ Given that his theory of pre-established harmony is intended as an explanation for the unity of the world, this claim establishes a very direct link between that theory and Leibniz's views on aggregation.³⁵²

Now, while I shall argue that some of the tenets Leibniz held about aggregates provided him with the basic materials for articulating his conception of the unity of the world, I shall also argue that other features possessed by this kind of entity led him to regard the world as a specific *type* of aggregate. The second overarching aim of this chapter is to show that Leibniz conceived of the world as an aggregate whose members are bound together by the representational activity of the divine mind, which bestows relational (accidental) unity and phenomenal reality on the world by representing it as one. I will try to show that, so conceived, the world can, in a sense, be said to have a unity which, while relational, cannot be reduced to the purely qualitative perceptual states of the substances it comprises. At the same time, this does not involve renouncing the strong interpretation of Leibniz's reductionism about relations defended in chapter 2: it only involves recognising that the domain in which such a reductionism applies is that of relations between *created* or

³⁵¹ Reference will be given in due course.

³⁵² There is textual evidence for this inference, too, as we shall see.

finite individuals. In the three previous chapters we have been concerned with six of the seven components of pre-established harmony disentangled in chapter 1; namely (C1) and (C4), in chapter 2; (C6) and (C7), in chapter 3; and (C5) and (C3), in chapter 4.³⁵³ But no explicit treatment has so far been given to (C2), the thesis that the overall source of harmony is, as Leibniz puts it, ‘ultimately God’ (NE 210). The second aim of this chapter can be seen as an attempt to flesh out one (in my view) interesting way in which that claim can be understood.

I divide my argument into five sections. Two preliminary sections set the stage by focusing on Leibniz’s theory of bodies as aggregates. I shall not be dealing with all the difficulties and interpretative issues surrounding that theory, which has in any case been done by others.³⁵⁴ Its interest for present purposes lies in the fact that, as I believe, it sets the framework for Leibniz’s pre-established harmony as an explanatory model of cosmological unification, to be picked up in subsequent sections. My remarks on aggregation are organised around two complementary issues: the necessity of indivisible (simple) active unities and the nature of such unities. Thus, in section 2, I present and discuss two Leibnizian arguments for introducing active unities (construed as forms) as constituents of bodies – the ‘argument from unity’ (2.2) and the ‘argument from activity’ (2.3), as I call them. With respect to forms *qua* unities, I argue that Leibniz’s (primary) goal in advocating forms is to lay the metaphysical foundations for the relational unity and reality of bodies *as aggregates*.³⁵⁵ Connected with this, I argue also for the thesis that, without form, Cartesian bodies fail to be not only substances but also aggregates; that is, without form, they have no degree of unity and therefore no reality at all. More generally, my discussion of these topics will allow me to place the issue of aggregation within the proper metaphysical sphere to which it belongs – the project of grounding the reality or being of body – a sphere to which, *mutatis mutandis*, the theory of pre-established harmony also belongs – as a project of grounding the reality or being of the world. As for forms *qua* active, I propose that activity is the ground of the unity of bodies as aggregates and that it should accordingly be seen as performing a metaphysically more fundamental role than

³⁵³ See the section ‘Conclusion and Transition to Chapters 2 to 4’ at the end of chapter 2.

³⁵⁴ An insightful and detailed treatment of Leibniz’s conception of bodies as (monadic) aggregates can be found in Rutherford (1990b) and (1994). See also Lodge (2015). For a comprehensive discussion of Leibniz’s notion of aggregate in general, see Lodge (2001).

³⁵⁵ My indebtedness to other scholars regarding this thesis will be noted in due course.

unity. In order to substantiate this proposal, in section 3 we turn to Leibniz's construal of the nature of simples' activity as representational activity. Taken together, my arguments in these sections bring us to the general conclusion that, for Leibniz, bodies are relational entities whose relational unity and reality derives from the perceptual power of the active unities which enter into them as constituents.

With this conclusion in the background, sections 4 to 6 concentrate on pre-established harmony and the world as an aggregate. First, in section 4, I offer textual evidence for my view that pre-established harmony is – or at least can be seen as – an extension of Leibniz's theory of aggregates. This, however, raises a problem, which I present in section 5. Particularly, I argue that, seen in conjunction with the strong version of the reducibility of relations which – as argued in chapter 2 – Leibniz favours, the model of plurality-unification yielded by his theory of aggregates turns out to deliver less than is needed for the substances comprising the world to become members of one unified world. Section 6 concludes by sketching a possible solution to this problem. As I anticipated, my suggestion in this last section will be that, unlike other types of aggregates, the world has the specific characteristic of being unified and 'realised' by God. I shall argue that, unlike other *prima facie* options available, this proposal has the virtue of accommodating both Leibniz's strong reductionism about relations and his view of the conditions under which the world can be one world – and thereby have (some degree of) reality.

2. Form, unity, activity: the necessity of simples

2.1. Preliminaries

Leibniz is famous for having advocated forms in the era of the great mechanical systems of nature.³⁵⁶ In doing so, the most significant opponent he faced was, of course, Descartes, whose ontology of the physical world is sufficiently well known not to require extended exposition here. For my purposes, it will suffice that we agree on its most distinctive metaphysical thesis and the main claims from which it derives. Briefly, we can put them in the form of the following argument: (P1) bodies are nothing more than matter. But (P2)

³⁵⁶ See *DM* § 10 (A VI, 4: 1542–4) and *NS* §§ 2–3 (GP IV: 478–9) for two famous Leibnizian statements of this project.

matter is nothing more than extended stuff. Therefore, (C) bodies are nothing more than extended stuff. On the Cartesian view, then, extension is the essence of body because body is matter alone and extension is the essence of matter.³⁵⁷

With Descartes, Leibniz agrees with (P2): Cartesian matter is nothing but extended stuff. Against him, however, he disagrees with (C): bodies are not purely extended stuff. Accordingly, he rejected (P1): bodies are not just Cartesian matter. In positive terms, form must be a constitutive principle of body. The qualifier ‘Cartesian’ in this reasoning is important, for Leibniz distinguished three senses in which matter is spoken of, namely matter as extension – ‘Cartesian matter’ or ‘mass in itself’ – secondary matter and primary matter.³⁵⁸ Now, secondary matter already involves unities or forms as constituents and hence is not extension alone:

[I]f one considers as the matter of bodily substance not formless mass (*masse sans formes*) but a second matter [*une matiere seconde*] which is the multiplicity of substances of which the mass is that of the total body, it may be said that these substances are parts of this matter, just as those which enter into our body form part of it. (A II, 2: 250 [n. 77]/LA 153)

Therefore, it is not matter understood in this sense that is relevant to Leibniz’s rehabilitation of forms. Rather, it is Cartesian matter – pure extension, ‘formless mass’ – that falls short of an adequate explanation of the bodily realm and thus demands the reintroduction of forms into natural philosophy.

Leibniz gives (at least) two arguments for forms, one based on the concept of unity (hereafter ‘argument from unity’ = AFU), the other on that of activity or force (hereafter ‘argument from activity’ = AFA).³⁵⁹ In this section we will look at these arguments in turn.

Before doing so, however, a preliminary remark must be made here about the level of reflection at which Leibniz argues for forms. According to Leibniz, forms are not to be invoked in order to account for particular phenomena or the spatiotemporal order of

³⁵⁷ That body/matter is for Descartes nothing but extension has been questioned by some Cartesian scholars. See e.g. Della Rocca (2003). Here I assume that (C) expresses Descartes’ actual view, an assumption which is in fact required for Leibniz’s criticism to make sense, as will emerge. For body/matter as extension in Descartes, see AT VIII: 46.

³⁵⁸ For this threefold conception of matter in Leibniz, see Adams (1994: 341 ff.) and Antognazza (2016a: 111).

³⁵⁹ The centrality of unity and activity to Leibniz’s theory of forms has been duly emphasised by Garber (2009: 55–181) and Antognazza (2016a: 74–85), among others.

appearances. He writes in § 10 of *DM*: ‘I agree that the consideration of these forms serves no purpose in the details of physics and must not be used to explain particular phenomena’ (A VI, 4: 1543/AG 42). As far as the ‘detail of physics’ goes, Leibniz thinks the Cartesian position is essentially correct. Yet, in his judgement, the question about particular phenomena and their derivative features does not exhaust the domain of ontological inquiry into bodies. To achieve a full understanding of them, it is necessary to descend from the level of phenomena to that of their ultimate ontological grounds, from the domain of mechanics and geometrical properties to the domain of the metaphysics of nature:³⁶⁰ forms are metaphysical principles whose purpose is to account for the reality or *being* of bodies (which is not to say that they explain the reality or being of bodies *as substances*, as we shall see). Let us now turn to Leibniz’s arguments for forms, beginning with the AFU.

2.2. *Forms, unity, aggregation: Leibniz’s AFU*

The essentials of Leibniz’s AFU can be seen to emerge through a consideration of § 3 of *NS*:

[I]t is impossible to find the principles of a real unity in matter alone, or in what is only passive, since this is nothing but a collection (*collection*) or aggregation (*amas*) of parts ad infinitum. Now a multiplicity can derive its reality only from true unities...So, in order to get to these real unities, I had to have recourse to a formal atom, since a material thing cannot simultaneously be material and perfectly indivisible, or possess of a genuine unity. So it was necessary to recall and, as it were, to rehabilitate substantial forms. (GP IV: 478–9/WF 11–2)

There are two important implicit premises operating in this reasoning. The first is that bodies must somehow *be*. That is, any acceptable ontology of nature must be able to accommodate the basic claim that bodies possess reality. We shall return to this premise shortly, the consideration of which makes (prima facie) room for reading Leibniz’s AFU in two distinct ways, depending on how ‘being’ or ‘reality’ is construed. Here I would just like to give some textual evidence in its support. Formulated in terms of ‘being’:

³⁶⁰ See A II, 3: 382; GP IV: 344, GP IV: 444, GP VII: 478. For a development of this point, see Antognazza (2016b), who convincingly argues that Leibniz’s distinction between the level of analysis of mathematical/mechanical physics and that of metaphysics is his most distinctive contribution to the process from which modern science eventually emerged as an autonomous enterprise.

Unless there were a soul, i.e. a kind of form, a body would not be a being (*ens*). (A VI, 4: 1988–9/RA 233–5)

And in terms of ‘reality’ – or ‘perfection’:

If there were only matter in body, there would be no reality or perfection (*nihil realitatis sive perfectionis*) in it. (A VI, 4: 1399/RA 245)

Similarly, replying to Arnauld’s complaint that he fails to see his reasons for rehabilitating forms, Leibniz writes that

[I]t is because I cannot conceive of any reality (*nulle réalité*) without true unity. (A II, 2: 187/LA 122)

This last formulation involves the second premise implicit in Leibniz’s reasoning in *NS* § 3: there is no reality without unity. In advocating this premise, as is well known, Leibniz draws from the Aristotelian-Scholastic doctrine of the transcendental properties of being. Unity is not a predicamental property – not a *res addita*, as both Aquinas and Leibniz put it – but a transcendental one: *ens et unum convertuntur*.³⁶¹ Hence, what is real must be one.³⁶²

Once the reality of body and the need of unity for reality have been established, Leibniz’s AFU can be put thus:

(P1) Only what is one is real.

(P2) Matter is not one.

(P3) A form is one or a unity.

³⁶¹ Leibniz’s endorsement of this thesis can be traced back to his earliest writing, the *Disputatio metaphysica de principio individui* of 1663: ‘Unity follows entity in concept (*in conceptu*), they are the same in thing (*in re idem est*)’ (A VI, 1: 16). See also GP IV: 18: ‘Transcendental unity (*unum transcendens*) is not an added thing (*res addita*)’. A II, 2: 186/LA 121: ‘I hold this identical proposition, differentiated only by the emphasis, to be an axiom, namely, that what is not truly one being is not truly one being either’. Also GP VI: 516, NE 211. For Aquinas, see *S. Th.* I, q. 11, a. 1. The *loci classici* for this doctrine in Aristotle’s writings are *Met* 1003b23–24 and *Met* 1061a17–18.

³⁶² The premise I am formulating – that what is real must be one or that unity is a condition of reality – is not equivalent to the stronger thesis that being and one are convertible. But the latter implies the former.

(P4) Bodies are matter alone or matter plus form.

(P5) Bodies are real.

(C) Bodies cannot be matter alone but must have form.

(P1) is an axiom, or at least a corollary of an axiom, for Leibniz regarded the thesis of the convertibility of one and being as axiomatic,³⁶³ and that thesis entails that unity is a condition of reality. (P3), (P4) and (P5), on the other hand, are assumed in the passage from *NS* § 3.³⁶⁴ So the bulk of Leibniz's reasoning focuses on (P2), the premise that matter – i.e. Cartesian matter, as we know – is not one.

His argument for this premise centres upon the problem of the infinite divisibility of matter. On the face of it, Leibniz's point seems to be this. Matter is infinitely divisible, for extension, in which the essence of matter consists, is infinitely divisible. Now, that matter is infinitely divisible means that it is nothing but a collection or aggregation of parts *ad infinitum*. That is, it consists of an infinite plurality of parts. Yet, if matter consists of an infinite plurality of parts, it has no ultimate parts: each material part, *qua* extended, is subject to further division. Therefore, as (P2) states, matter is not one. Now, if sound, this reasoning yields the negative conclusion that, contrary to Descartes' view, body is not only extended matter. But it also allows Leibniz to establish the positive thesis that forms are necessary in order to give a satisfactory account of body. For if matter is not one, then, given (P1), matter lacks reality, which entails that, on the Cartesian account, bodies lack reality as well. But this is inconsistent with (P5): bodies are real. So, in order to explain the ontological status of material objects, something in itself non-extended or simple must ground the unity and reality of bodies. And this something is forms, as (P3) holds. Note that the AFU's point is not therefore to deny the infinite divisibility of matter in order to save the reality of bodies: to Leibniz's mind, matter *qua* extension is infinitely divisible or 'only a collection or aggregation of parts *ad infinitum*'. The point, rather, is that unless one posits

³⁶³ See the third passage quoted in n. 361.

³⁶⁴ As I said, more about (P5) is forthcoming. (P3), and more particularly the idea that forms are principles of unity, will occupy us in 2.3. As for (P4), there is no text known to me in which Leibniz attempts to demonstrate it – which is of course not surprising given the prominence of hylemorphism in the Aristotelian-Scholastic tradition.

a form or true unity, such a collection or plurality would not even be possible: unity is a condition for something to be, and an infinitely divisible aggregation of parts outside parts fails to meet this condition.

Now, I think that, as it stands, this reasoning displays some of the key elements of Leibniz's criticism of the Cartesian conception of body as purely extended stuff. Yet we may wonder whether it captures all its details.

Let us revert to Leibniz's 'realistic commitment', as we may call it, expressed by (P5). According to this premise, recall, bodies are real. But there is a complexity here. It hinges on the fact that, for Leibniz, being or reality comes in *degrees*: things can be more or less.³⁶⁵ Thus, in a collection of terse notes on ontology composed around 1680–1685, Leibniz says:

Reality includes the possible, excluding the impossible, the positive excluding the negative. But the positive in turn has its degrees (*gradus*). For if it is complete, it constitutes a substance; if less, an accident. (A VI, 4: 399)³⁶⁶

As one would expect given the convertibility of being and one, the same applies to the category of unity:

One *per se* is that which is one because of the thing itself (*a parte rei*), as I. Something is turned into (*fit*) one *per accidens* when a plurality of entities is conceived in the manner of one by one act of the mind, like a pile of logs. (A VI 4: 401)³⁶⁷

According to these texts, the basic categories which delineate the Leibnizian ontological landscape are substantial being and accidental being, on the one hand, and, corresponding to them on the side of unity, *per se* unity and accidental unity, on the other. Now, the last quoted passage makes it clear that Leibniz regards the category of accident as

³⁶⁵ Advocates of the univocity of being will surely retort: things either exist or they do not. True. But 'being' in the present context is not 'existence': it is 'reality' (*realitas*) or, as Adams explains, 'thinghood', since *realitas* is an abstract noun formed from the noun *res* ('thing') (2007: 102–4). In any case, the doctrine that there are degrees of being might perhaps be insufficient for establishing the view that being (or 'being') is not a case of synonymous or univocal predication. That is, more than differences of degree may be required for attaining something like the doctrine of the analogy of being. On this, see McDaniel (2009) and (2013). But we need not discuss this issue here. On Leibniz, univocity and analogy, see Futch (2008: 175 ff.).

³⁶⁶ Translation in Rutherford (1995: 105). See also A VI, 4: 740/P 47 (1686): "A positive term is the same as an 'entity'... An entity is either in itself [*per se*] or accidental [*per accidens*]". For *realitas* has having degrees, see A VI 4: 1358; A VI, 4: 1390; A VI, 4: 1429.

³⁶⁷ See also A VI, 4: 301.

corresponding to that of aggregate. Several passages support this. To quote just one: ‘An accidental entity (unity³⁶⁸) – for instance, a woodpile, a machine – is what is only a unity by aggregation [*per aggregationem*]’ (A VI, 4: 301/RA 283).³⁶⁹ One could object that other passages suggest a different view. In *DM* § 8, for example, Leibniz says that ‘the quality of being a king which belongs to Alexander the Great’ is an accident (A VI, 4: 1540/AG 41). This seems to sit uneasily with the idea that there is an exact correspondence between the category of accident and that of aggregate. However, in this passage, Leibniz cautions that ‘the quality of being a king’ is ‘taken in abstraction from the subject’ (A VI, 4: 1540). And Leibniz was of course a (however *sui generis*) nominalist about abstract entities. Taking this into account, and given the numerous texts in which Leibniz employs ‘aggregate’ and ‘accident’ interchangeably, it seems safe to conclude that, for Leibniz, *concrete* reality comprises two types of entities, namely substances and aggregates, even if the latter does not exhaust the domain of accidental reality *simpliciter*.³⁷⁰ We can summarise Leibniz’s taxonomy of concrete reality (CR) as follows:

CR: For any (concrete) entity *a*, *a* is either (i) a substance, in which case it has unity through itself, or (ii) an aggregate, in which case it has accidental unity.

Now, if we look at the AFU bearing CR in mind, I think we will agree that the argument is somewhat abstract and incomplete. For if CR holds true, then the question arises as to *how* to interpret ‘real’ in AFU’s (P5), whether in the sense in which substances are said to be real or in that in which aggregates are said to be real. That is, CR creates space for construing Leibniz’s chief point in the AFU as the claim that

(1) (Cartesian) matter fails to account for the reality of bodies as substances

³⁶⁸ The word ‘unity’ is an interlinear addition written by Leibniz above the word ‘entity’. See RA 421, n. 3. Given the convertibility of one and being, it poses no problem of interpretation.

³⁶⁹ See also A VI, 4: 162; A VI, 4: 566; A VI, 4: 576; GP II: 516. The correspondence between accident and aggregate appears also to be implied in Leibniz’s letter to Arnauld of 30 April 1687, where he says that there are different ‘degrees of accidental unity’ and goes on to explain these differences as a function of stronger and weaker relations obtaining between the constituents of aggregates. See A II, 2: 190.

³⁷⁰ See Lodge (2002: 62) for this conclusion. In a previous article, Lodge suggests that ‘aggregate’ and ‘accident’ should not be taken as synonymous (2001: 469). But here Lodge does not consider differences that may spring from considerations about concrete versus abstract reality, as he does in his 2002 article.

or, more strongly, as the claim that

- (2) (Cartesian) matter fails to account for the reality of bodies both as substances and as aggregates.

In turn, (2) furnishes grounds for thinking that

- (3) Leibniz's interest in forms stems from the fact that, once they are posited as bodily constituents, bodies can be aggregates.

Of course, (3) is not a logical consequence of (2). For, even if (2) is true, it is still possible that Leibniz could (in a certain period, for example) have wanted to rehabilitate forms in order to ground the reality of bodies as substances. However, Leibniz could *not* (coherently) have wanted to rehabilitate forms in order to ground the reality of bodies as aggregates had he upheld (1) but not (2), that is, had he regarded Cartesian matter, which is formless mass, as an aggregate. So (2) does, as I said, furnish grounds for (3).

Which option should be seen as Leibniz's, (1) or (2)? While it is not my intention to adjudicate this issue here, I think there is good reason to believe that it is the second one.³⁷¹

There is a fairly obvious objection that can be made against this view, so I should begin by confronting it: (2) – the objection goes – is contradicted by the passage of *NS* § 3 which I took as a basis for my formulation of the AFU. For there, in quite plain language, Leibniz says that, without forms or true unities, a body would be 'nothing but a collection or *aggregation (amas)* of parts' to infinity (GP IV: 478/WF 11; my emphasis). Given the exhaustive nature of the aggregate/substance distinction in CR, this suggests that, without forms or true unities, Cartesian bodies do meet the requirements for aggregative reality and *per accidens* unity yet not those for substantial reality and *per se* unity.

³⁷¹ Indeed, a more sensible formulation of this question would be: Which option should be seen as Leibniz's, (1) or (2), and *when*? This places us right in the middle of the still heated debate concerning Leibniz's attitude towards idealism and corporeal substance during the middle period, a debate in which, as already noted, I shall not properly engage.

I think, however, that Leibniz's remark in *NS* § 3 should be taken with a pinch of salt. Stuart Brown has persuasively argued that the *NS* is a 'diplomatic' (and anti-Cartesian) writing (1996: 39–40). In it, that is to say, Leibniz is willing to play down or even drop some of his beliefs in order to maximise the chances of a favourable response.³⁷² This makes it reasonable to suspect that, in suggesting that Cartesian bodies are aggregates in *NS* § 3, Leibniz may well be disclosing only part of the story. His aim is to show that the Cartesian account of body is false and that it should therefore be rejected. To achieve this, however, it was enough for him to demonstrate that, understood as pure extension, bodies fail to be substances. There was no need to add the further thesis that Cartesian bodies fail also to be aggregates. If this is on the right lines, then Leibniz's point in *NS* § 3 can be read as an *internal* criticism of the Cartesian view, particularly as a *reductio* aimed at disproving a statement endorsed by the Cartesians themselves.³⁷³

But there is more direct evidence for the view I am recommending, too. In a draft of his letter to Arnauld of 28 November/8 December 1686, Leibniz writes this (I break the text down into two sections to facilitate the analysis below):

- [a] Bodily substance does not consist in extension or divisibility; for it will be conceded that two bodies set apart from one another, for instance two triangles, are not really one substance; let us now assume that they come together to make up a square: will the mere fact of their contiguity turn them into one substance? I do not think so. Now, each extended mass can be considered as composed of two or a thousand others; there is only an extension achieved through contiguity. Thus one will never find a body of which it may be said that it is truly one substance. It will always be an aggregate of many...
- [b] *Or rather, it will not be a real entity* since the parts making it up are subject to the same difficulty, and since one never arrives at any real entity, because entities made

³⁷² See e.g. GP I: 423 (to Foucher, 1695), where Leibniz explicitly cautions that the *NS* was intended for the 'le public' (WF 3). See also A I, 10: 134 (to Bossuet, 1694), where Leibniz says he would want to disclose his philosophical meditations by publishing them in the *Journal des Savants*, but only 'in order to test the water' (WF 36). Finally, see GP VII: 451 (to Des Billettes, 1696): '[The *New System*] is not a complete body of philosophy...One has to take small steps to walk safely' (WF 55–6).

³⁷³ I think this is also the interpretation that should be placed on those passage in which, variously phrased, Leibniz presents the view that if bodies were mere extension deprived of forms/unities, then they would be mere aggregates/phenomena/appearances. See e.g. A VI, 4: 1464; GP VII: 444 and A II, 2: 114–5 – on which more in a moment (see text [a]). As I read him, Leibniz's point in these passages is not intended to be coupled with the thesis that bodies (for him) are substances and not phenomena/aggregates/appearances. He is just showing that, in conceiving of bodies as mere extension, the Cartesians end up contradicting themselves, since *they* believe that bodies are substances and not mere phenomena/aggregates/appearances. For a defence of this reading, see Rutherford (2008).

up by aggregation have only as much reality as exist in their constituent parts. (A II, 2: 114–5/LA 88; my emphasis)

This is a key text.³⁷⁴ In [a], Leibniz begins by arguing to the effect that ‘bodily substance (*substance corporelle*) does not consist in extension or divisibility’, thus leaving open the question of whether purely extended bodies, while failing to be substances, might perhaps satisfy weaker senses in which reality is predicated, i.e. whether they might perhaps be aggregates. But immediately afterwards we get [b], which fully dispels this doubt by advancing a much stronger thesis: a purely extended body ‘will not be a *real entity* (*ne sera pas un estre reel*)’ (my emphasis).³⁷⁵ And this, note, is expressly advanced as a *correction* of the view, provisionally entertained in [a], that purely extended bodies are not substances but only ‘aggregates of many’.³⁷⁶ Hence, Cartesian bodies are neither substances nor aggregates for Leibniz. Given that, as CR states, the categories of substance and aggregate exhaust the types of concrete beings that there are, it follows from this that Cartesian bodies, insofar as they are extension alone, are mere abstractions or not anything concrete:

I deny that extension is a concrete, for it is abstracted from the extended...extension is only an abstract thing, and it requires something extended. (Robinet 443/AG 261)³⁷⁷

Why can’t Cartesian bodies be aggregates, according to Leibniz? In a sense, for the very same reason that Cartesian bodies cannot be substances. This is not to say that

³⁷⁴ The importance of this passage has been duly emphasised by Lodge (2002), to whom I am indebted. However, my analysis of the text differs from his.

³⁷⁵ Or, more precisely, a purely extended thing will lack *concrete* reality. See below. The strong conclusion in the quoted passage is also implied by Leibniz’s claim, made elsewhere in the Arnauld correspondence and quoted earlier, that without true unities bodies would not have ‘any reality’ (*nulle réalité*) (A II, 2: 187; my emphasis). For an earlier text, see A VI, 4: 1399/RA 245: ‘[I]f there were only matter in body, there would be no reality or perfection in it (*nihil in eo realitatis sive perfectionis*)’ (my emphasis).

³⁷⁶ Unlike the draft, Leibniz’s actual letter of 2 November/8 December 1686 does not mention [b], but only an expanded version of the insight in [a]. It would have been pertinent to Leibniz to mention it, however. In fact, in his reply (of 4 May 1687) to Leibniz’s actual letter, part of Arnauld’s attempt to block Leibniz’s arguments consists precisely in conceding the kind of charged presented in [a] while retreating to the less demanding view that bodies are aggregates: ‘I see no drawback in believing that in the whole of corporeal nature there are only machines and aggregates of substances’ (A II, 2: 154/LA 108). In his copy of Arnauld’s letter, Leibniz added the following: ‘If there are aggregates of substances, there must also exist true substances from which all the aggregates are made’ (A II, 2: 154, n. 1/LA 108, n. 2). This is the same insight governing [b]. As he omitted [b] in the actual letter, Leibniz had to wait till the next letter (of 30 April 1687) in order to make it clear to Arnauld that he does not think that Cartesian bodies can be aggregates either. See A II, 2: 184–5.

³⁷⁷ See also GP II: 269.

aggregates and substances must satisfy the same ontological requirements: the former are *per se* unities, the latter are not. The point, rather, is that the *parts* of an aggregate – of a Leibnizian aggregate, that is – must satisfy the conditions of substantial reality. Thus, Leibniz tells us in [b] that Cartesian bodies fail to be aggregates because ‘their *parts* are subject to the *same* difficulty’ that explains Cartesian bodies’ failure to qualify as substances. What is the difficulty? That Cartesian bodies are not truly one: extension is achieved through contiguity and contiguity does not deliver *per se* unity.³⁷⁸ So, if Cartesian bodies are not substances because they are not truly one, and if they are not aggregates because their parts are subject to the same difficulty that explains their failure to be substances, then Cartesian bodies fail to be aggregates because their parts are not truly one. The parts of an extended mass are extended masses, and the parts of these extended masses are in turn extended masses, so ‘one never arrives at any real [i.e. truly one] entity’. The burden of this reasoning does not therefore rest, or so it seems to me, on the problem of an infinite regress *as such*: it is not the possibility of infinities *qua* infinities that troubles Leibniz. What he deems problematic and indeed rejects, rather, is the possibility of infinities of Cartesian parts, just *partes extra partes* to infinity.³⁷⁹ Fundamentally, then, what drives Leibniz’s AFU, understood in the strong sense of an attempt to refute the reality of Cartesian bodies *tout court* (both as substances and as aggregates), is his commitment to the principle of the reciprocity of one and being. The affirmation of aggregates of Cartesian parts would require accepting that there are entities which involve no unity, which would in turn violate that principle.³⁸⁰ For Leibniz, therefore, the constituents of aggregates must

³⁷⁸ Discussions of Leibniz’s argument for this claim can be found in Sleigh (1990: 119 ff.) and Lodge (2002: 60–1).

³⁷⁹ In his *Elementen* (1746), Leonhard Euler makes a remark that nicely captures this point. Contrasting Leibniz’s views with those of his (purported) follower, Christian Wolff, he writes:

Mr. von Leibnitz appears to admit this infinite divisibility by maintaining that *infinitely many monads* are required to represent the smallest body. In this Mr. Wolff is of a *totally different opinion* by maintaining that the divisibility of bodies does not proceed infinitely far’ (II, § 3; my emphasis).

Euler’s remark might seem inaccurate in some respects, but I think it is correct in that it implies that, for Leibniz, the problem of an infinite regress in the division of bodies has not to do with the infiniteness of the regress itself, but rather with the fact that bodies (considered as pure Cartesian matter) would be infinite collections of parts. This is in keeping, of course, with Leibniz’s view that *secondary* matter is actually divided into infinitely many substances. See GM II: 157, GP II: 268, GP VI: 598–9. For more on this, see Robert (2018).

³⁸⁰ In connection with this, I should perhaps clarify that the convertibility of one and being applies not only to *substantial* beings: ‘[B]eing and one are convertible, but just as there is being by aggregation, so also there is

themselves be truly one entities, entities from which aggregates can derive their (accidental) unity and thereby their reality. As Leibniz writes in his 30 April 1687 letter to Arnauld,

[E]very entity through aggregation presupposes entities endowed with a true unity, because it obtains its reality from nowhere but that of its constituents. (A II, 2: 184/LA 120)³⁸¹

And these truly one, constitutive entities which ground the reality of bodies as aggregates are the forms (or simple entities, later ‘monads’) Leibniz wants to rehabilitate.³⁸² We will return to the relationship between unities and aggregates in section 5, where I shall argue that, upon elaboration, it triggers a problem for Leibniz’s understanding of the unity and reality of the world on the model of the unity and reality of aggregates.

2.3. *Forms and activity: Leibniz’s AFA*

Suppose we agree that, as I have suggested, forms are necessary in order to ground the unity and reality of bodies as aggregates – rather than, or not only, as substances, if there are any. What is it that makes forms good candidates for explaining the unity and reality of bodies as aggregates? According to AFU’s (P3), a form is one or a unity. But why can something which is a unity in itself bestow unity on something which lacks its own? To answer this question, we must turn to Leibniz’s second argument for forms, the argument from activity. A caveat before doing so: the role of activity with respect to unity can only be grasped fully once Leibniz’s construal of the nature of activity as representational power is in place. That construal will be our topic in section 3. Accordingly, most of what I am going to be saying here will be given greater specificity there.

The chief thesis articulating the AFA is that forms are essentially active. The argument is sometimes presented in connection with the problem of motion.³⁸³ In order to

one by aggregation, although this entity and unity are semi-mental (*semimentalis*)’ (GP II: 304/LR 30). As Lodge points out, here the principle is said to apply to aggregates explicitly (2001: 481, 472).

³⁸¹ See also A II, 2: 184–5. That aggregates derive (at least partly) their reality from their own intrinsic constituents is accepted by many scholars, as far as I could see. See e.g. Rutherford (1990b: 531–2), Sleigh (1990: 121–2), Adams (1994: 241–4), Lodge (2002: 67), and Merlo (2012).

³⁸² In *this* respect – and I stress, *this* – I am in *general* – and I stress, *general* – agreement with Levey (2007: 61), who sees Leibniz’s argument for monads as ‘an extension of his prior argument for incorporeal forms’.

³⁸³ See e.g. Mendelson (1995: 37).

get at a metaphysically satisfactory explanation of motion, it is necessary to distinguish between the quantity of motion and its force, a distinction which cannot be drawn if bodies are nothing more than matter, the essence of which is purely passive extension. Now, forms, unlike matter, are essentially active – they are ‘entelechies’. Hence, forms can serve as a basis for a satisfactory metaphysical explanation of motion.

There is no question that Leibniz resorted to the quantity/force of motion distinction in order to motivate his rehabilitation of forms.³⁸⁴ Nevertheless, I think there is another way of understanding the AFA.

Let us revert to the passage from § 3 of *NS* discussed in the previous section. In particular, reconsider its opening sentence:

[I]t is impossible to find the principles of a real unity in matter alone, or *in what is only passive*, since this is nothing but a collection or aggregation of parts *ad infinitum*. (GP IV: 478/WF 139; my emphasis)

Here Leibniz explicitly equates ‘matter alone’ with ‘what is only passive’ (*ce qui n’est que passif*). On the face of it, this is not surprising, for matter and passivity – as well as the correlative notions of form and activity – are intimately interwoven notions in the Aristotelian tradition, and Leibniz is drawing loosely on that tradition. However, the fact that Leibniz deploys the notion of matter alongside that of passivity in connection with the problem of unity is, in my opinion, relevant. For given the ‘matter/what is only passive’ equation in this specific context, the following conclusion follows: what is only passive is not a principle of unity. In turn, this suggests that what is active is a principle of unity. And these conclusions suggest two things. First, it is precisely the passivity of matter that renders it a bad candidate for something that bestows unity and hence reality on body. Secondly, it is precisely the activity of forms that renders them good candidates for something that performs such a function. If this is granted, we can put Leibniz’s AFA thus:

(P₁) What is merely passive is not a principle of unity.

(P₂) What is active is a principle of unity.

³⁸⁴ See e.g. GP IV: 442–4.

(P₃) Matter is merely passive.

(C₁) Matter is not a principle of unity.

(P₄) Forms are active.

(C₂) Forms are principles of unity.

What I want to emphasise here is that, so understood, Leibniz's AFA can be read as complementing, and indeed sustaining, the AFU, and more specifically AFU's (P₃): while that premise presupposes that a form, insofar as it is a unity in itself, is sufficient for accounting for the unity of bodies, the AFA shows us the reason for this presupposition: forms or simples can bestow unity and reality on physical objects *because* they are active. Thus, Leibniz's rehabilitation of forms is based not only on the idea that Cartesian matter, being essentially extension, is infinitely divisible and therefore lacks unity. It springs also from the view that, being merely passive, matter cannot function as a unifying factor of a given plurality and hence as a principle of the reality of aggregates. So, at least in a sense, I think we can say that, for Leibniz, activity is metaphysically more fundamental than unity: activity grounds the unity of body and hence its reality.³⁸⁵ *Qua* unities or in-themselves-simples, forms allow one to get at 'final elements' in the analysis of things (GP IV: 482/AG 142). *Qua* active, on the other hand, forms work as unifying principles of the collection: they are 'the first absolute principles of the composition of things (*premiers principes absolus de la composition des choses*)' (GP IV 482/AG 142).³⁸⁶ In this sense, the activity of forms grounds not only what we might call 'diachronic plurality' or 'unity in succession', but also the unity of a coexistent or synchronic plurality of members: it unifies the passive extended mass – the continuously repeated multitude that it involves – which contains no

³⁸⁵ That activity plays a metaphysically more fundamental role than unity is suggested, though in passing, by Look and Rutherford in the introduction to their edition of the correspondence between Leibniz and Des Bosses. See LR: xli. See also Antognazza (2016a: 82), who makes the same suggestion.

³⁸⁶ Note that Leibniz does not say here that unities 'compose' things: they are rather the '*principles* of the composition of things'. I will say something about this later.

source of unity.³⁸⁷ The centrality that this interpretation ascribes to the activity of forms is in keeping with the fact that, after focusing on the problem of the unity of matter in *NS* § 3, Leibniz immediately goes on to say that the very nature of forms ‘consists in force (*la force*)’ (GP IV: 479): forms are essentially ‘primary forces, which contain not only actuality...but also an originating activity (*activité originale*)’ (GP IV: 479/WF 12).³⁸⁸ Also, it fits well with Leibniz’s oft-repeated thesis that the capacity to act is the very ‘mark of substance’ (GM VI: 235) or what most formally defines the substantiality of substances: ‘activity is of the essence of substance in general’ (NE 68).³⁸⁹

Hitherto, we have seen that forms must be rehabilitated because unity is a condition of reality and activity is a condition of unity. But nothing has so far been said about *how* Leibniz’s active simples are supposed to bestow unity on the aggregates they constitute. This brings us from the topic of the necessity of simples to that of the nature of simples and their activity.

3. *Representational activity and aggregative unity/reality: the nature of simples*

In rehabilitating forms as active principles of unity and reality Leibniz does more than merely align himself with the Aristotelian tradition. For he also advocates the view that every form is a soul-like principle of unity, a view which Jean École (1964: 9) has called Leibniz’s ‘pan-psychism’ or pan-animism: ‘every form is in a way a soul (*quodammodo Anima*)’, as we read in one piece (A VI, 4: 1400/RA 247). This represents an advance over ‘pan-formalism’ – as we could call the view that forms are constitutive principles of every body – insofar as the kind of activity that forms possess is conceived on the model of living things: substances ‘have something of the nature of life’ (GP IV: 483/WF 16). In this respect, Leibniz distances himself from the Aristotelian tradition, showing advocacy of a

³⁸⁷ For Leibniz’s characterisation of extension as coexistent parts, see GP II: 169. For extension as involving a continuously repeated multitude, see GP IV: 394. Textual basis for the distinction between successive and coexistent plurality is also found in GP IV: 394.

³⁸⁸ For an earlier text, see A VI, 4: 1399/RA 274 (*ca.* 1678–1681): ‘Form is the principle of action’.

³⁸⁹ See also GP IV: 588/WF: 163: ‘[E]nergy or activity...constitutes the nature of a substance’. GP VI: 598/AG 207: ‘A Substance is a being capable of action’. GP III: 464: ‘The nature of each substance consists in the active force’. Also GP III: 58, GP IV: 469–70, GP IV: 482, GP IV: 508, GP IV: 594, GP VI: 350, GP VI: 354, GP VI: 598, GP VII: 316, GP VII: 508.

(neo-)Platonic view: there is a kind of animation on every level and in everything in the world.³⁹⁰

But there is more than this. For pan-animism is subject to one important further qualification: forms or souls are construed as *mind*-like entities. ‘Every form is in a way a soul, i.e. capable of sensation (*sensus*) and appetition’ (A VI, 4: 1400/RA 247).³⁹¹ Accordingly, as seen in previous chapters, the ‘life’ or activity with which souls or forms are endowed is perceptual or representational in kind.³⁹² Given the results of my analysis of Leibniz’s AFA, the question that this prompts is: how does the representational activity of a mind-like entity bestow unity and hence reality on something which lacks unity and reality of its own (body)? To address this question, we need first to briefly outline another characteristic Leibnizian doctrine and its relation to aggregation: phenomenalism.

As I see it, Leibniz’s phenomenalism consists of two main claims. We have already met the first one in our discussion of Leibniz’s AFU: considered as pure extension or formless mass, bodies are *not* real beings. Yet, as Leibniz himself cautions in a famous letter to De Volder, his metaphysics does not ‘eliminate’ bodies but only ‘reduces’ them to what they are. Phenomenalism’s second claim is that bodies – and their motions – *are* phenomena grounded on, or resulting from, simples:

I do not really do away with body (*tollo*), but reduce (*revoco*) it to what it is. For I show that a corporeal mass ... is not a substance, but a phenomenon resulting from simple substances, which alone have unity and absolute reality. (GP II: 275/LV 319)

Bodies, which are commonly taken for substances, are nothing but real phenomena. (GP II: 262/LV 287)

Matter and motion are not so much substances or things as the phenomena of perceivers. (GP II: 270/LV 307)³⁹³

³⁹⁰ See Look (2011b: 92). For the view that everything is animated, see especially *Mon.* §§ 63–70 (GP VI: 618–9). For this view in the Platonic tradition, see e.g. Plato, *Timeaus*, 34b; Plotinus, *Ennead*, V.1. 2.

³⁹¹ See also A VI, 4: 1988/RA 235: ‘It is the nature of a soul or form to have some perception (*perceptionem*) and appetite’. On Cartesian grounds, the idea that forms are mind-like entities may seem to add nothing new to the idea that they are souls. On Aristotelian grounds, however, souls are not necessarily mind-like entities, since representational power or perceptive life is accorded to some souls only – plants have ‘vegetative’ souls yet not ‘sentient’ souls.

³⁹² See chapter 1, section 3.4 and chapter 3.

³⁹³ See also GP III: 636.

Now, as I read it, this second claim of Leibniz's phenomenalism is also part of the conclusion he has already attained through his arguments for forms, as interpreted above: bodies are aggregates which borrow their accidental unity and aggregative reality from forms/simples. Of course, this conclusion is ostensibly about aggregates, not about phenomena. Yet I think both doctrines boil down to the same basic point.³⁹⁴

The following distinction may help me to explain this claim. There is a twofold way of considering bodies, in an absolute sense and in a relative sense. In an absolute sense – i.e. considered as such – bodies lack reality. In a relative sense, however, bodies are real beings, though in the qualified sense of phenomenal beings: bodies are '*real phenomena*' (*phaenomena realia*), as Leibniz puts it in the second passage just quoted (GP II: 262).³⁹⁵ Now, at this point we may ask: what is it that explains that bodies have only phenomenal reality rather than reality of their own or reality considered absolutely? As it seems to me, it is the same reason that explains that bodies have only *aggregative* reality rather than reality of their own; at bottom, that is to say, it is the convertibility of one and being. Let me explain.

We have seen that, deprived of a formal principle, bodies lack unity. Given the convertibility of one and being, this means that, as such, bodies lack reality. But we have also seen that Leibniz is committed to the reality of actual bodies. Hence he is led to rehabilitate forms, truly one entities from which bodies derive their unity and reality as aggregates. Thus a body is a unity or being *ab alio*, something having a degree of unity and reality by virtue of something other, namely the *per-se*-one entities that constitute it. But that is precisely what it means for something to be a phenomenon: a being which exists not through itself but only in relation to something ontologically more primitive or as a *manifestation* of absolute, *per-se*-real constituents. So, the chain of conceptual connections articulating Leibniz's view that bodies are phenomena seems to be this: bodies are

³⁹⁴ Here I line up with Rutherford (1990a), Adams (1994: 217–61), Antognazza (2016a: 109–12) and Duarte (2016), all of whom agree that Leibniz's thesis that bodies are aggregates is consistent with his thesis that bodies are phenomena – though their positions vary with respect to important interpretative points. Against them are Loeb (1981: 299–309) and Mates (1986: 204), who think these theses to be in conflict with each other. Another case in point is Jolley (1986: 41 ff.). However, while Jolley regards both theses as inconsistent, he believes that Leibniz never really endorsed phenomenalism.

³⁹⁵ See also A VI, 4: 555 and A VI, 4: 559: '*A suppositum* is either a singular substance, which is a complete being and one *per se*, like God, some mind, I; or a real phenomenon (*Phaenomenon reale*), like any body, the world, a rainbow, a pile of stones' (translation in Rutherford [1995: 110]). Note that here aggregates are explicitly included within the category of real phenomena.

phenomena insofar as they have only a relative reality – a reality as a manifestation of something ontologically more basic – and they have only a relative reality because, lacking intrinsic or *per se* unity, they must derive their unity and reality from *per-se-one* constituents. Consequently, the thesis that bodies are phenomena cannot be divorced from the thesis that bodies are aggregates. On the contrary, as Adams puts it, bodies are phenomenal beings ‘*because they are aggregates*’ (1994: 219). In Leibniz’s own words:

Bodies are nothing but aggregates constituting something which is one accidentally or by an external denomination, and *therefore (adeo)* they are well-founded phenomena. (GP VII: 344/AG 319; my emphasis)³⁹⁶

Now, as we read in one of the phenomenalist statements quoted above, the principle from which bodies derive their unity and phenomenal/aggregative ontological status is perception: ‘matter and motion are...the phenomena *of perceivers (percipientium phaenomena)*’ (GP II: 270/LV 307; my emphasis). How? How do bodies derive their aggregative/phenomenal reality from perceivers?

A clue to this question occurs, as I understand it, in Leibniz’s discussion about compound ideas in the *New Essays*:

The unity of the idea of an aggregate is a very genuine one; but fundamentally we have to admit that this unity that collections have is merely a respect or a relation, whose foundation lies in what is the case with each of the individual substances taken alone. So (*ainsi*) the only perfect unity that these entities by aggregation have is a mental one, and consequently, their very being is also in a way mental, or phenomenal, like that of the rainbow. (NE 146)

This passage reinforces the claim that aggregates do have a certain unity, though not the unity of substances. That is, instead of being intrinsically or *per se* one, aggregates have a relational or accidental unity that obtains among a plurality of entities by virtue of truly-one entities which work as their ‘foundation’. This means that the unity of aggregates is only possible if the unifying, grounding entities have certain properties on their own – or ‘taken alone’, as Leibniz says in this passage – properties which allow the members of the plurality to enter into certain relations to each other, thereby becoming a certain unity. As

³⁹⁶ See also GP III: 622 and GP VII: 564, where the thesis that bodies are aggregates is treated as equivalent to the thesis that they are (well-founded) phenomena.

Watkins (2006: 271) observes, this means in turn that the members of the plurality cannot be so united when ‘taken alone’ or separately: otherwise no unifying principle would be required in the first place. In other words, for a relation between the members of an aggregate to obtain, something must take them together. Further, that something must possess the relevant property for doing so.

It is here that representational activity comes into play: the unities – ‘individual substances’ – which enter into bodies as constituents are endowed with the property of perception. Hence, they can represent the plurality into which they enter as one. That is, bodies are given phenomenal reality by the perceptual power of their constituents, which accidentally unify the multiplicity of distinct entities that bodies comprise by perceiving them together:

[A]ggregates themselves are nothing but phenomena, since besides the ingredient monads, everything else is added by perception alone, by virtue of the fact that they are *perceived together*. (GP II: 517; emphasis added)³⁹⁷

While the introduction of the notion of perception adds a further layer of complexity to the grounding model discussed in the previous section, I think that the chief insight driving Leibniz’s view here is essentially the same as the one governing his argument for the necessity of forms, particularly the AFA. According to this argument, as seen above, forms *qua* active are collection-unifiers or the ‘first absolute principles of the composition of things’ (GP IV 482/AG 142). Now, this does not of course mean that forms *compose* bodies: forms are simple, bodies are extended. Rather, what Leibniz says is that forms are the ‘absolute *principles* of the composition of things’ (*principes absolutus de la composition des choses*) or, as he puts it elsewhere, that on/from which bodies are ‘founded’/‘result’.³⁹⁸

³⁹⁷ Translation in Adams (1994: 249). (See n. 65 on that page for a justification for the translation, which renders *simul* in its last clause as ‘together’. See also Rutherford [1995: 207, n. 25], where he says that *simul* can have ‘no temporal aspect’). I am implying here that, in the case of bodies as aggregates, the ‘ingredient monads’ and the perceiving principle are one and the same thing, which is not immediately obvious in this passage and indeed controversial in light of others. But see below.

³⁹⁸ See GP II: 265/LV 303: ‘[A]ccurately speaking, matter is not composed of (*componitur ex*) constitutive unities; rather it results (*resultat*) from them, since matter, i.e. extended mass, is nothing but a phenomenon founded (*fundatum*) in things...Substantial unities are not parts but the foundations (*fundamenta*) of phenomena’. See also Leibniz’s *Remarks on M. Foucher’s Objections*, where the issue is picked up in connection with the ‘labyrinth of the (composition of) the continuum’ (GP IV: 490/WF 45). I think these passages should be enough to dispel the very old concern that Leibniz’s ‘aggregate thesis’ ‘leads to the very difficult problem of explaining how the aggregation of unextended beings...can result in something extended’

Critically, what the notion of perception does here is to provide Leibniz with the right sort of theoretical tool that allows him to explain *how* this ‘founding’ process works: construed as representational power, the activity of Leibnizian unities is the ‘principle of the composition of things’ in that it *puts together* – that is, *com-poses* (*cum-* [with, together] + *ponere* [to put, place]) – the continuously repeated manifold that bodies as aggregate involve by perceiving it as one. We may observe at this point that this interpretation fits remarkably well with the view, referred to above, that Leibnizian forms perform a purely metaphysical explanatory function. Like forms, perception is an ontological notion which as such is not meant to reach ‘particular phenomena’ or ‘the details of physics’ (A VI, 4: 1543/AG 42). Rather, it is presupposed as a condition of the possibility of the *unity* and therefore of the *being* of bodies as aggregates/phenomena.³⁹⁹

One could object that this reading identifies the perceiving entities which unify an aggregate with its *internal constituents*, while the case is that many of Leibniz’s preferred examples of aggregates suggest otherwise. Think of a flock of sheep and a shepherd (A VI, 1: 75, GP II: 252) or of an army and its general (GP II: 96): both the shepherd and the general are external to the aggregates they represent.⁴⁰⁰ Essentially the same objection could be constructed with regard to bodies as phenomena. For doesn’t Leibniz suggest that phenomena, and bodies as phenomena, are entities that appear *to*, and are unified by, human minds in certain ways?⁴⁰¹ This suggests that the phenomenal status of bodies goes hand in hand with their being intensional objects of external perceivers.

(Furth [1967: 188]): Leibniz’s unities are *metaphysical* explanatory principles which, as such, do not form bodies ‘by accumulation’, to use Furth’s own words (1967: 188). They are rather meant to explain bodies’ unity and reality. See below. Versions of the mentioned concern were among the favourite objections of anti-Leibnizian thinkers in eighteenth-century Germany. See e.g. Euler, *Elementen*, §§ 55 ff.. For the most part, however, I think that the version of Leibniz’s monadology these thinkers were attacking was actually Wolff’s. Since, unlike Leibniz, Wolff conceived of monads as composing extended bodies, the objection was natural – and indeed effective. For more details, see Robert (2018). For Wolffian monads – or ‘*Elementen*’ – and their relation to space/extension, see *VGG* § 602 and *CG* § 219 ff. For comments, see Rutherford (2004).

³⁹⁹ If I understood him well, here I am in essential agreement with Rutherford, who reads ‘Leibniz’s interest in the issue of the reality of body [as pertaining] in the first place to the *essence* of body’ (1990b: 526–7). See also Rutherford (1990a: 25), where we read that the ‘relation of grounding [between bodies and their constituents] should in fact be understood as an *ontological* relation’ (emphasis his). In this way, the idea of metaphysical grounding, so fashionable today, is given more content in the writings of an old philosopher than in many contemporary attempts (in my opinion).

⁴⁰⁰ Likewise, in some passages Leibniz says that aggregates ‘exists in *our* mind’ (A II, 2: 185/LA 121) and that ‘we make an aggregate’ (A VI, 4: 627).

⁴⁰¹ See e.g. A VI, 4: 555; GP II: 264, GP III: 567 and GP VI: 625, to mention just a few passages among many others.

These are good objections and warrant a great deal more comment than I can give them here. In short, however, I think it plausible that this type of aggregate/phenomenon was not quite what Leibniz had in mind when thinking of *individual bodies* as aggregates and phenomena – *a* sheep of the flock, *a* soldier of the army. Or, to soften the point a little, I think there is reason to believe that this subjective, more markedly epistemic account of aggregate/phenomenon coexisted with another, more metaphysical account.⁴⁰²

First, I suggested above that, like his view of bodies as aggregates, Leibniz's phenomenalism is intimately interwoven with his commitment to the convertibility of one and being. If this suggestion is on the right track, I think it would be odd for us to read Leibniz as holding the view that the ground of the unity of bodies and that of their reality are located in two distinct principles: the source of unity in the external power of human perceivers, the source of reality in bodies' intrinsic, *per-se*-real constituents. Given that unity and being are reciprocal, it is much more natural to think that that which unifies something is *also* that which bestows reality upon that something.

Secondly, the idea that bodies are phenomena of human external perceivers appears to entail that they are human constructions for Leibniz. Or, at the very least, it entails that the reality of bodies strongly relies on human operations.⁴⁰³ While there are passages which suggest this, I find it hard to square with some of the most distinctive elements of Leibniz's

⁴⁰² Towards the outset of his treatment of phenomenalism, Adams claims Leibniz to be a 'forerunner of Kant's phenomenalism', insofar as both conceive of phenomena as 'objects of awareness to someone to whom they appear' or 'intentional objects' (1994: 219). I think that at least part of Adam's claim can be preserved if one construes, as I am proposing, Leibnizian phenomena (as applied to individual bodies) as intentional objects of the very perceiving entities which constitute them – though 'awareness' would have to be dropped, since only some of these percipients are, for Leibniz, aware of their perceptions. It is of course true that the knowing subject, who constitutes for Kant what appears as 'phenomenal object', has in his critical philosophy a prominence that is absent from Leibniz's system. But Kant never doubted that phenomena are phenomena or manifestations *of* things-in-themselves, i.e. of (roughly speaking) Leibnizian monads, by Kant's own lights. See Paton (1936: 61–2). For some relevant passages, see e.g. *KrV*, Bxxvi, Bxxvii, A 251–252. Perhaps less happily for the internal coherence of his own system, Kant even suggests that things-in-themselves are *causes* of phenomena. See Ak IV: 286, 289; *KrV* A44/B61.

⁴⁰³ In one of his contributions to the topic of aggregation, Lodge goes as far as to suggest that bodies, for Leibniz, would depend on humans' 'interests'. See Lodge (2001: 485). But in a later contribution he opts for distinguishing between two kinds of aggregates, namely bodies and groups thereof, the former having the principle of unity within themselves. See Lodge (2015). In any case, what I have in mind is not Lodge's suggestion in his 2001 paper, for bodies' reliance on human operation does not of course imply that they are arbitrary human constructions or that they depend on humans' 'interests'. A rainbow, for instance – one of Leibniz's recurrent examples of phenomenon (e.g. A VI, 4: 1648; GP II: 262, GP II: 390) – does depend on human operation yet also on some objective properties of the water drops. See Rutherford (1990a: 16, 17). An interpretation of Leibnizian aggregates as conventional or arbitrary entities is also at odds with Leibniz's view that relations – aggregates are relational entities – must have an *objective* foundation. On this, see Mugnai (1992: 25–6).

theory of substance, particularly his world-apart view of substance. As Leibniz formulates it, the world-apart doctrine involves a cluster of senses in which substances are said to be radically independent, but certainly one of these senses is this: the phenomena that appear to a substance do not require the existence of any other (finite) substance. That is, substances, as we may put it, are *phenomenally* independent.⁴⁰⁴ Thus, in *DM* § 14 Leibniz says that ‘each substance is like a world apart, independent of all other things, except for God; so all our *phenomena* (*phenomenes*)...are only a consequence of our being’ (A VI, 4: 1550/AG 47; my emphasis). And we know what comes next: should God annihilate a substance’s universe, everything would *seem* to it exactly as it seemed to it before its universe was annihilated (A VI, 4: 1551). Provided bodies are phenomena, it follows from this that a substance – any substance – would continue to perceive itself as related to its body – and, from different perspectives, to all bodies – even if it were the only (finite) substance that existed.

Third: I think that the identification of bodies’ perceptive principle of grouping with their own intrinsic perception-gifted constituents is in keeping with, if not presupposed by, Leibniz’s view that bodies are *real* aggregates/phenomena.⁴⁰⁵ Indeed, in a passage from the *New Essays*, Leibniz seems to link this feature of bodies, i.e. that they are in a sense real, with the facts that they have real unities as intrinsic constituents *and* that these unities are representational in nature:

It should be borne in mind that matter, understood as a complete being (i.e. secondary matter...) is nothing but an aggregate or the result of one; and that any *real* aggregate presupposes simple substances or real unities. If one also bears in mind what constitutes the *nature* of those real entities, namely *perception* and its consequences, one is transported to another world. (NE 378, my emphasis)

⁴⁰⁴ I borrow the idea of phenomenal independence from Harmer (2016: 39), who convincingly argues for phenomenal independence – alongside ‘ontological’ and ‘causal’ independence – as one of the senses of independence involved in the world-apart doctrine.

⁴⁰⁵ Leibniz does of course suggest in some passages that phenomena count as real on account of features of the perceptions of external perceivers. See e.g. GP II: 270 for a famous passage. However, one could perhaps read this kind of passage as identifying a sufficient yet not necessary *mark* of the reality of phenomena, rather than what makes them real. This is in line with the fact that in his “On the Method of Distinguishing Real from Imaginary Phenomena” (ca. 1683–1686) Leibniz links the *internal* features of phenomena to their reality, thus suggesting that a phenomenon can be real even if nothing else exists – recall here world-apart. See A VI, 4: 1500 and, for comments, Harmer (2016: 44–5). But the elaboration and discussion of this reading must be left for another occasion.

The context of this passage is pertinent to the issue at hand. Leibniz is discussing with Locke the question whether matter is naturally apt to ‘perceive and think’. I shall not dwell on the theological problem which frames this question, but Leibniz’s answer, in brief, is this: it is. Why? Because matter – that is, ‘secondary matter’, which is the actual matter of the bodies we see – always involves simple substances, and hence God could not have not given ‘immaterial substances to matter’ (NE 378–9). This answer clearly presupposes that the perceiving principle of the aggregate – or secondary matter – is *in* the aggregate.

Finally, a careful reading of the quoted passage from NE 146 lends further support to this conclusion. In its last sentence, Leibniz says that the unity of aggregates ‘is a mental one, and consequently, their very being is also in a way mental, or phenomenal’. Presumably this is because aggregates are unified by perception or representational power. Taken by itself, this is of course consistent with the view that bodies are unified by the representational activity of an external mind. However, note that the sentence in question is introduced by Leibniz as a *conclusion* of its preceding sentence. And the preceding sentence says this: the ‘unity that collections have is merely a respect or a relation, whose foundation lies in *what is the case with each of the individual substances taken alone*’ (my emphasis). This statement is what *explains* the claim that aggregates have a purely representational ontological status. If so, then such a status must be a consequence of the properties of – or of ‘what is the case with each of’ – the individual substances which enter into aggregates as constituents.

4. From bodies as aggregates to the world as an aggregate: pre-established harmony as a system of representative unity

The import of the foregoing remarks can be summarised in a single sentence: the principle of the accidental unity and phenomenal reality of bodies as aggregates is the representational power of the simple entities which constitute them.

Why is this relevant to Leibniz’s theory of pre-established harmony? As I anticipated, my view is that, understood as an explanation of the unity of all substances, the theory of pre-established harmony is an extension of, or can be understood by analogy with, Leibniz’s conception of the unity and reality of aggregates. Now I have to support my view with appropriate textual evidence.

Consider:

- [a] The world, which is the whole assemblage (*l'assemblage*) of contingent things. (GP VI: 106/H 127)

I call “World” the whole succession and the whole collection (*collection*) of all existent things. (GP VI: 107/H 128)

The world [is the] aggregate (*aggregatum*) of finite things. (GP VII: 322)

The actual universe is nothing but a collection (*collection*) of...compossibles. (GP III: 573)

- [b] [b1] Beings through aggregation...are only semi-beings (*semientia*), whose reality consists in the union which a mind makes or in an extrinsic denomination or relation. [b2] Such is...the pre-established harmony, which makes that one thing seems to influence another; these are therefore mental or relational results. (LH IV, III, 5e, Bl. 23)⁴⁰⁶

The quotations in [a] offer a general definition of the world: the world is an aggregate, collection or assemblage.⁴⁰⁷ Although this definition does not make explicit what it is that makes the world to be one world, we can fill out its content by relying on our discussion of the unity of aggregates in the previous section, whose main claims are actually summarised in [b1]: the unity and reality of an aggregate consists in a relation imposed by a perceiver on the diversity it involves, which means that distinct members are joined together by the representative activity of that perceiver. By itself, this yields the conclusion that the unity and reality the world possesses is the unity and reality of an aggregate, that is, a phenomenal or representational unity and reality. The more decisive point for the view I am advancing is given, though, by [b2]. For, after having summarised his conception of the unity of aggregates in [b1], in [b2] Leibniz explicitly relates this conception to his pre-established harmony: ‘Such is...the pre-established harmony’, he says. This suggests that, as Leibniz sees things, the mechanism through which the pre-established harmony unifies the world is the same as the mechanism through which aggregates are unified: the world is

⁴⁰⁶ Translation in Rutherford (1995: 271–2). I am thankful to Professor Rutherford for having shown me a scanned copy of the original manuscript of this passage.

⁴⁰⁷ Leibniz employs these terms interchangeably in more than one place. See e.g. GP VI: 589 and, for more references, Lodge (2001: 469).

unified, and thereby given phenomenal reality, insofar as it is represented as one by the substances it comprises.

It might be objected at this point that Leibniz's model of unity by aggregation could perhaps explain the unity of substances as coexistent entities, but not the unity between their successive states, which is of course essential to the pre-established harmony. However, Leibniz's model of unity by aggregation is wide enough to apply to a multiplicity of items existing at successive times, too. For instance, Leibniz is ready to talk of an aggregate of 'Roman Emperors', as well as of aggregates of 'times'.⁴⁰⁸ As he sees things, moreover, whenever there are entities or items that can coexist, the states ascribable to them must also be consistent at *every* time. For a world comprising a plurality of distinct entities is, of course, a possible world. Now, if a world is possible, then the members it comprises must be compossible. By Leibniz's lights, this means that their perceptual states must agree at every time:

I have reasons for believing that not all species are compossible in the universe, great as it is; not only with regard to things existing at the same time (*ensemble en même temps*), but also with regard to the whole *succession* of things (*à toute la suite des choses*). (NE 307; my emphasis)

Thus, if the world has a synchronic unity, it will also have a diachronic unity. Note that what I am saying here remains non-committal as to whether a plurality of compossible items is sufficient for those items to perceive one another, let alone to harmonise with one another. A set of items representing one another does, however, entail that they are compossible. And compossibility, as I said, entails synchronic as well as diachronic unity.

Let us recapitulate. First, by reflecting on Descartes' account of bodies as extended matter alone, Leibniz is led to rehabilitate forms as active unities capable of bestowing unity and reality on bodies (section 2). These active unities are conceived of as mind-like entities endowed with perception or representational power. This permits Leibniz to explain how his active unities ground the derivative unity and phenomenal reality of bodies, namely by representing as one the multiplicity they involve (section 3). Finally (section 4), this explanation is used by Leibniz as a basis for articulating his conception of the unity of all

⁴⁰⁸ See e.g. A VI, 4: 162. See Lodge (2001: 471, n. 17).

substances: while Leibnizian substances are ‘windowless’ and therefore neither admit nor emit any causal impetus, the multiplicity that the world comprises is ‘compensated’ or ‘reduced’ to unity by the perceptions of substances. To be sure, there is much in this argument that requires further elaboration. What it does for us, however, is to establish a clear link between Leibniz’s theory of aggregates and his pre-established harmony between all substances. Also, it allows us to appreciate the level of reflection at which the latter is articulated: like forms/simple substances and their perceptual power with respect to bodies, the pre-established harmony is offered, at least in part, as an answer to a question of fundamental ontology, namely that of how a plurality of non-interacting substances – the world – can nevertheless be one plurality and thus possess some degree of reality or being. It is just here, however, that a problem looms.

*5. A problem: metaphysical reduction of aggregates, perceptual reduplication,
pre-established harmony and the unity of the world*

What I have in mind arises from the conjunction of two ideas that, as I shall argue, Leibniz is committed to. On the one hand, Leibniz favours a reductionist conception of the unity and reality of aggregates (5.1). On the other, such a conception is at odds with the degree of unity and reality that, according to some passages, the world is supposed to have in virtue of the pre-established harmony (5.2). This casts doubts over my claim that Leibniz’s pre-established harmony is modelled on his account of the unity and reality of aggregates, or, for that matter, over the view that the world is an aggregate.

5.1. Metaphysical reduction of aggregates (MRA and MRA)*

We have seen that, according to Leibniz, Cartesian matter cannot be an aggregate because it lacks proper constituents, truly-one entities from which the aggregate can borrow its unity and reality. This, we have also seen, entails that Leibnizian aggregates must have proper constituents. But Leibniz combines this thesis with a very strong view. Consider:

[E]very entity through aggregation presupposes entities endowed with a true unity, because it obtains its reality *from nowhere but (ne tient sa réalité que)* that of its constituents, so that

it will have no reality at all if each constituent entity is still an entity through aggregation. (A II, 2: 184/LA 120; my emphasis)

It seems too that what constitutes the essence of an entity through aggregation is *only* a (*n'est qu'une*) state of being of its constituent entities. (A II, 2: 185/LA 121; my emphasis)

[E]ntities made up by aggregation have *only as much reality* (*n'ayant qu'autant de réalité*) as exist in their constituent parts. (A II, 2: 114–5/LA 88; my emphasis)⁴⁰⁹

As I read these passages, they display a reductionist conception of the reality of aggregates: metaphysically considered, aggregates are *nothing more* than the items that go together to constitute them. Call this the ‘metaphysical reduction of aggregates’ thesis (MRA). While the passages I have quoted talk about the reality of aggregates, it is clear that Leibniz would allow MRA to apply to their unity as well, for aggregates, as seen in section 3, derive both their unity and reality from their constituents. And, as should be clear in light of our discussion there, the statement is also meant to hold for the unity and reality of phenomena.⁴¹⁰ To keep things simple and avoid repetition, however, I shall formulate MRA as a statement about aggregates, making reference to phenomena when necessary:

MRA: For any aggregate, a , if for any entities, b_1 and b_2 , b_1 and b_2 are constituents of a , then (i) b_1 and b_2 are substances and (ii) a ’s unity/reality reduces to the unity/reality of b_1 and b_2 .

I will refine this formulation in a moment, but before doing so I would like to reinforce my claim that the metaphysical reductionism expressed in it is actually part of Leibniz’s view of aggregates. Two points are relevant. First, note that, as we have seen in some of the passages quoted in the two previous sections, Leibniz thinks of aggregates as *relational* entities or entities having unity ‘by an extrinsic denomination’ (GP VII: 344/AG 319).⁴¹¹ It is easy to be tempted to read this claim as supporting the view that aggregates – bodies as

⁴⁰⁹ Where Mason says ‘constituent parts’ Leibniz says ‘*ingrediens*’. ‘Ingredients’ may perhaps have been preferable in light of the discussion in 2.2.

⁴¹⁰ Thus, in his letter to Des Volder of 30 June 1704, Leibniz writes that ‘extended mass is a phenomenon founded [in constitutive unities]’, adding that ‘there is no reality in anything except the reality of unities (*non sit nisi unitatum*)’ (GP II: 268/LV 303; my emphasis). The same claim is made about aggregates in a previous letter. See GP II: 261 (January 21, 1704).

⁴¹¹ See also LH IV, III, 5e, Bl. 23 (quoted in p. 212).

well as groups thereof – are unified by human minds which are external to the aggregates themselves. It seems to me, however, that such a reading is not forced on us. Bodies – and aggregates more generally – are *themselves* complex structures involving many (indeed infinitely many) distinct constituents. So, it makes perfect sense to characterise bodies as relational entities or as having unity ‘by an extrinsic denomination’, even if that unity, as argued above, is the outcome of the grouping activity of the perception-equipped constituents which are intrinsic to the aggregate itself.⁴¹² In any case, the point I want to stress about Leibniz’s view that aggregates are relational entities is that it lends support to MRA. For, as argued in detail in chapter 2, extrinsic denominations fully reduce to, or strongly supervene on, the extrinsically denominated individuals. Consequently, if aggregates are relational entities or are unified ‘by an extrinsic denomination’, then their unity – and with it their reality, given the convertibility of one and being – will reduce to the unity and reality of their constituents. This is what MRA asserts.

The second point concerns Leibniz’s employment of ‘foundation’ as the term which appropriately captures the sort of relation holding between aggregates’ constituents and the constituted, derivative aggregates. Again, what I want to contend draws heavily on ideas I have developed at greater length in chapter 2, so I shall be brief: if F is the foundation of f , then f ’s reality is exhausted by F ’s reality.⁴¹³ I regard this principle as a key piece of Leibniz’s metaphysics, as is clear from the fact that he resorts to it at key junctures of his (at least mature) thought. Thus, in his famous letter to De Volder of 30 June 1704, Leibniz says that matter (i.e. phenomena, bodies) is ‘founded (*fundatum*) in things’ (i.e. in true unities) or, as he says two sentences later, ‘substantial unities are the foundations of phenomena (*fundamenta phaenomenorum*)’ (GP II: 268). But Leibniz intended this thesis to be coupled with this other thesis: ‘there is nothing in things except simple substances and in them perception and appetite’ (GP II: 270/LV 307). Pretty clearly, the underlying assumption is a commitment to a strongly reductionist (and idealistic) metaphysics: bodies are founded in true unities and such unities are all there really is. This means that the reality of the result must be exhausted by the reality of its foundation, which is what really is. And so, once again, we are brought to MRA. For the constituents of an aggregate are the

⁴¹² See Antognazza (2016a: 107–8) for a similar point.

⁴¹³ See chapter 2, section 3.3 (C).

foundations of that aggregate. Hence, the reality of an aggregate is exhausted by the reality of its constituents.

These considerations, I think, support ascription of MRA to Leibniz. Upon examination, however, they also prompt a refinement to the formulation I have given it.

I have so far been talking about reduction of unity and reality to constituents – in the *plural*. This is indeed what MRA itself states: *a*'s unity/reality reduces to the unity/reality of both *b*₁ and *b*₂. But MRA also states that *b*₁ and *b*₂ are *substances*. Presumably, this means that *b*₁ and *b*₂ will have the properties that substances have. And one such property, as we know, is that substances are radically independent beings – like '*mondes à part*' – so much so that the elimination of the universe surrounding a substance would not be noticed by that substance: substances are phenomenally independent, to use the terminology employed earlier. I need to unpack this doctrine a little in order to explain its relevance in the present context. The important points, however, have already been developed in previous chapters, so I shall limit myself to a few summary remarks. Two remarks are in order, in particular: (i) first, world-apart trades crucially on Leibniz's construal of substances' properties as perception.⁴¹⁴ More specifically, *since* every substance reproduces thorough information about its universe in its own intrinsic perceptual states – the absolute, purely qualitative foundational states to which substances' relations to all 'other' substances reduce⁴¹⁵ – the annihilation of a substance's universe would not be noted by that substance: the fact that substances perceive the whole universe is what explains the phenomenal independence of substances involved in world-apart.⁴¹⁶ (ii) Second: substances' property of perception is inextricably linked to substances' reality or being. To wit, the perceptions of substances constitute the very being of substances. This is what in chapter 3 I called the 'Perception-Constitution Claim'.⁴¹⁷ The relevant passages were

⁴¹⁴ See chapter 2, section 3.4, for an elaboration of this and related topics.

⁴¹⁵ As argued in chapter 2 (section 3.4), these relations of substances to all 'other' substances are in truth perceptions of substances upon themselves. Substances perceive relations in themselves, which is not to say that they have relational perceptions. But see the quoted portion of chapter 2 for more on this.

⁴¹⁶ This connection between perception and the world-apart doctrine is particularly clear in the protasis of the following sentence from § 14 of *NS*:

Since each of these substances accurately represents the whole universe in its own way and through a particular point of view, and since its perceptions or expressions of external things occur in the soul at just the right time in virtue of its own laws, as in a world apart, as if there existed nothing but God and that soul [...], there will be a perfect agreement between these substances. (GP IV: 484/WF 18)

presented and commented on there, but it will be worth recalling some of the key texts here. ‘[The] internal perceptions [of a substance]’, we read in *NS* § 13, ‘arise from its own original constitution, that is to say, from its representative nature [...], which [...] constitutes its individual character’ (GP IV: 484/WF 18).⁴¹⁸ Or, as Leibniz says in a draft for his letter to Arnauld of 30 April 30 1687: ‘[The soul’s] entire individual essence consists in nothing but this expression of the universe’ (A II, 2: 167).⁴¹⁹ Applied to all substances, the same view is visible in *DM* § 15, where Leibniz connects, perhaps equates, degree of perception with degree of perfection, that is, quantity of reality: to be more or less perfect/real is a function of perception (A VI, 4: 1554).

Where do these remarks lead us? In short, they lead us to the following, stronger version of MRA:

MRA*: For any aggregate, a , if for any entities, b_1 and b_2 , b_1 and b_2 are constituents of a , then (i) b_1 and b_2 are substances and (ii) a ’s unity/reality reduces to the unity/reality of b_1 or b_2 .

Note well the second conjunct of the consequent of the conditional in this formulation: ‘or’, rather than ‘and’, as in MRA’s original version. Thus, whereas MRA claims that the unity and reality of aggregates reduce to those of their constituents taken *collectively* (both b_1 and b_2), MRA* states that such a reduction would obtain even if the constituents were taken *distributively* (b_1 or b_2). To recast and fix the line of argument developed in the previous paragraph, I take this to be a consequence of the fact that the constituents of aggregates are substances, in the following way. If aggregates’ constituents are substances, then they are ‘worlds apart’ and hence phenomenally independent. Thus, if b_2 is annihilated, the aggregate of which b_1 is a constituent will remain phenomenally identical: a will continue to be represented in b_1 ’s perceptual states just as it was represented before b_1 ’s constituent partner – b_2 – ceased to exist. Given that substances’ reality is a function of their perception

I will say more about this passage later.

⁴¹⁷ Or, more precisely, the ‘Constitution Claim’, which is part of the Perception-Constitution Claim. See chapter 3, section 5.

⁴¹⁸ For substances as ‘representative in nature’ (*nature*) or ‘in being’ (*estre*) see GP VI: 617 and A II, 2: 243, respectively.

⁴¹⁹ As we know, ‘expression’ here stands for ‘perception’, for it occurs in a unity, namely the soul. See chapter 1, section 3.4 (B).

and that the reality and unity of aggregates reduce to those of their constituent substances, it follows from this that the reality and unity of a is totally involved in that of b_1 . The same reasoning holds if we switch b_1 with b_2 . So, to phrase the point in general terms, we can conclude that the reality and unity of aggregates is totally distributed in *each* of their constituents. And thus the metaphysical reduction of aggregates obtains ‘unilaterally’, as it were, with respect to any of their constituents. This is what MRA* asserts.⁴²⁰

5.2. *The problem: MRA*, perceptual reduplication, pre-established harmony and the unity of the world*

Suppose we agree that MRA* is actually part of Leibniz’s philosophy. Or, at any rate, let us agree that MRA* is a consequence of a systematically coherent rational reconstruction of some of Leibniz’s most distinctive metaphysical doctrines.

What would it mean for the world to be unified as an aggregate if MRA* holds true? Well, it would mean that, like aggregates, the world is unified by being wholly represented in each of its radically independent, like-world-apart members. Further, it would mean that, like the unity and reality of aggregates, the unity and reality of the world reduce to the unity and reality of such members. The connection that I have argued obtains between aggregation and pre-established harmony being granted, it follows from this that, if MRA* is true, then

- (1) the unity/reality the world possesses on account of the pre-established harmony consists in its being wholly represented in the perceptual states of each of its radically independent, like-world-apart substance-members.

⁴²⁰ I think this reasoning, or anyhow some of its ingredients, goes deep down until the heart of Leibniz’s view (or the view about Leibniz I am incline to favour) that bodies are not genuine corporeal substances. *Qua* substances, the constituents of bodies are *separable*. But a ‘real or intrinsic union’, to use Tournemine’s words, requires ‘essential dependence’ (WF 249). Such a dependence can only obtain if the things that enter into composites are non-separable (hence incomplete, hence not substances). Only then they would *require* one another so that they can form something like a ‘real union’. In other words, bodies could be substances only if there were no substances ‘in’ bodies: either the constituents of bodies are substances or bodies themselves are substances – we cannot keep both. Thus, the idea of a corporeal *substance* whose body is an aggregate of corporeal *substances* is, in my opinion, problematic. For more on this and related topics, see Adams (1994: 262–308), Rutherford (1995: 265–88), Rozemond (1997), Antognazza (2015b).

Call (1) the ‘perceptual reduplication of the world in each of its members’ thesis – or ‘Perceptual Reduplication’, for short. Like MRA*, to repeat, Perceptual Reduplication makes for a strongly reductionist conception of the world: as ‘the aggregate of finite things’ (GP VII: 322), the world has no unity over and above the unity of the substances it comprises.

Is Perceptual Reduplication the correct way of understanding Leibniz’s conception of the unity of the world by his pre-established harmony? To be sure, there are texts which suggest that it is.⁴²¹ And that is indeed what our treatment of substances’ universal relatedness in chapter 2 would seem to support: every substance relates to every other substance in its universe in the sense that every substance represents the whole universe in its intrinsic, qualitative perceptual states, the absolute foundations to which/from which relations fully reduce/result. Thus ‘the universe is, in a sense [i.e. representationally], multiplied as many times as there are substances’, as Leibniz says in *DM* § 9 (A VI, 4: 1542/AG 42).⁴²² The fact, and indeed the problem, is, however, that there are other important texts pulling in the opposite direction.⁴²³ And here I want to concentrate on them.

In footnote H to the entry ‘Rorarious’ in the first edition of his *Dictionnaire*, Bayle raises the following complaint:

The dog’s soul would feel hunger and thirst at certain times, even if there were no bodies in the universe; even if ‘there existed nothing but God and the soul’ [...]. That [a soul] should be constructed in such a way that it would have felt pain at the moment that it was hit, even if it had not been hit, and even if it had continued to eat the bread without being disturbed or prevented, that is what I cannot understand. (WF 73)

What Bayle is complaining about is, in essence, the cluster of tenets that configures Perceptual Reduplication as a model of the unity among substances: substances are like worlds apart, whose agreement or harmony with other things – their belonging to one world – is secured by the intentional reproduction of the universe in their perceptions. And such a

⁴²¹ A particularly clear text is found in *NS* § 14. We shall return to it shortly.

⁴²² See the conclusion to chapter 2 and section 3.4 of that chapter, where more passages of this type are quoted.

⁴²³ Attention to these passages has been drawn by Rutherford (2017) and (1995: 188–211), who also articulates, and offers a solution to, the interpretative issues they pose in relation to Leibniz’s view of the requirements for the unity of the world. Much of my initial impetus and inspiration for taking up this topic derives from reading his work. For more on Rutherford’s view, see n. 430.

model is precisely what Leibniz articulates in *NS* § 14, the particular section of that work that Bayle is referring to in the quoted passage:

Since each of these substances accurately represents the whole universe in its own way and through a particular point of view [...], as in a world apart, as if there existed nothing but God and that soul [...], there will be a perfect agreement between these substances. (GP IV: 484/WF 18)

Confronted with Bayle's criticism, Leibniz may well have tried to respond by developing Perception Reduplication in greater detail. Yet he did not. Instead, he said this:

God could have given each substance its own phenomena, independent of all others; but in doing so he would have made as many unconnected worlds, so to speak, as there are substances. (GP IV: 519/WF 81)

This is a striking passage. As I see it, it represents a *prima facie rejection* of the unification model of Perceptual Reduplication that Leibniz favours in *NS* § 14 and to which MRA*, as I have argued, leads him: if, in line with Perceptual Reduplication – Leibniz appears to be saying – substances were like worlds apart, 'independent of all others' and each one having its 'own phenomena', then there 'would be as many unconnected worlds as there are substances', that is, they would fail to constitute *a* world. The same view occurs in other places, where it is linked to the theory of pre-established harmony in a way that, in the face of *NS* § 14, cannot seem but puzzling. Replying to Bayle's objections in the second edition of his dictionary, Leibniz once again insists that the idea of substances as world-apart entities which communicate merely by perceiving each other does not express what is the case in the actual world, adding this: that that idea is in fact '*destroyed (destruit) [by his] pre-established harmony*' (GP IV: 590). Compare this with the quoted passage from *NS* § 14. In its first clause – which is a 'since' clause⁴²⁴ – Leibniz says that each substance accurately reproduces the whole universe in its perceptions, as 'in a world apart'. The second clause – which expresses the consequence – states that there is a 'perfect agreement' or harmony between substances.⁴²⁵ In other words, substances harmonise, or, for that

⁴²⁴ The French text would be analysed differently, but it is consistent with AG's rendering.

⁴²⁵ The name Leibniz uses for pre-established harmony in *NS* is, indeed, 'the hypothesis of agreement'. See GP IV: 485. See also GP IV: 520; A II, 2: 82.

matter, belong to one unified world, *because* they perceive the whole universe.⁴²⁶ But now we find Leibniz apparently saying the opposite: the theory of pre-established harmony *blocks* the idea of the world as something whose unity consists in its being perceptually reproduced in each of its substances. There is more to the unity of the world than the unity of the world-apart substances it comprises, and that is *thanks* to the pre-established harmony. The tension with Perceptual Reduplication is clear.

There is an important objection that could be made against all this, and I must tackle it before leaving for the final section: isn't the tension I am pointing out resolved by Leibniz's well-known distinction, prominent in discussions of the world-apart doctrine, between absolute or metaphysical (im)possibility and hypothetical – i.e. God's perfect will presupposed – or moral (im)possibility? Metaphysically speaking, God *could* have made substances as world-apart beings, independent of everything except for himself. That, however, is morally impossible. Hence, he did not. Tension relieved.

I disagree.

No doubt that Leibniz's first quoted reply to Bayle seems to suggest something like that: 'God *could* have given each substance its own phenomena, independent of all others', he writes (my emphasis). And there is no question that the absolute/hypothetical (im)possibility distinction plays a key role in Leibniz's discussions of the world-apart doctrine. Yet I do not believe it resolves the tension I have identified. The reason is this. When Leibniz resorts to the absolute/hypothetical (im)possibility distinction in discussions of the world-apart doctrine, what he usually wants to reject is a metaphysically possible *implication* of that doctrine, namely that there can be *one* created substance only.⁴²⁷ Metaphysical solipsism is, by Leibniz's lights, hypothetically or morally impossible – though metaphysically possible: God maximises perfection and harmony, and this entails him creating as much variety as possible.⁴²⁸ But it is one thing to reject the solipsistic ontology whose metaphysical possibility is implied by the world-apart doctrine; it is quite another to reject the world-apart doctrine *itself*. And what Leibniz appears to be doing in the quoted replies to Bayle is, as it seems to me, the latter: substances are *not* entities

⁴²⁶ I argued in detail for this view in chapter 1, section 3.4 (B), where more textual evidence is provided.

⁴²⁷ See e.g. GP II: 496, GP II: 307.

⁴²⁸ See e.g. A VI, 4: 1538, GP VI: 616, GP VII: 303.

‘independent of all others’. That is, the world-apart view of substance is false. So, the tension persists.

6. A proposed solution: God as the principle of aggregation of the world

6.1. Preliminaries: a (prima facie) dilemma

The foregoing discussion has, it would seem, placed us in front of the following dilemma: either we stick to the idea of substances as worlds apart and the constellation of doctrines that accompanies it (Perceptual Reduplication and MRA*, fundamentally) or the world is one. What can we do?

Neither of the alternatives in the dilemma is particularly attractive. The second would allow us to safeguard substances’ belonging to a unified system but at the price of renouncing what is arguably a very fundamental set of well-entrenched, hallmark Leibnizian doctrines. Furthermore, it would entail renouncing the two claims – defended in chapter 2 and also integral to that set – that relations fully reduce to substances’ intrinsic perceptual states, and that such states are absolute, purely qualitative non-relational states. As though this were not enough, the idea of the world as an aggregate would also have to be jettisoned, for MRA* applies to aggregates and, according to our dilemma, MRA* precludes the unity of the world. The first option would allow us to avoid all this. However, if my reading of Leibniz’s remarks to Bayle is on the right lines, it would force us to conclude that, for Leibniz, there are ‘as many unconnected worlds as there are substances’ – exactly what he says to Bayle is not the case.

While some scholars may perhaps be willing to embrace one of these alternatives and pay the associated costs, I want to try to argue in favour of a different one.⁴²⁹ This is

⁴²⁹ On the side of the second horn of the dilemma I would locate Puryear (2010), Plaisted (2002), and Ishiguro (1977, 1972: 147–50), among others. Although they do not articulate their views with explicit reference to the problem of the unity of the world, all of them reject, or at least downplay, the idea of substances’ radical independence involved by the world-apart doctrine. Accordingly, they reject also strong reductionism about relations and the denial of intersubstantial causation as correct readings of Leibniz’s views on these matters (their particular stances varying as to detail, admittedly. See e.g. Puryear [2010: 763, n. 1] and Plaisted [2002: 103, n. 34]). On the opposite side seems to be T. Feeney (2016), who detects a tendency in Leibniz’s thinking to what he calls ‘acosmism’, that is, the idea that there is no world as something over and above substances (though he also develops an argument to counterbalance this tendency). Consistent with my argument in the

the view that the world is a special *type* of aggregate whose principle of grouping is God. I should register up front that I have not been able to find any *explicit* statement of this view in Leibniz's *corpus*. Yet I think that a plausible and textually supported case can be made for it. What is more, I think that, unlike the other *prima facie* available alternatives I have mentioned, this view can accommodate both horns of the (purported, I can now say) dilemma, which, given the implications of those alternatives, makes it at least worth pursuing.⁴³⁰ I shall begin by explaining why I think this is so (6.2). Then I shall present some texts that, taken together, lend support to my interpretation (6.3). A caveat is in order before moving on. I aim to provide little more than the outline of a sketch of this view here. The more detailed work will have to wait for another occasion.

6.2. 'Horizontal' reducibility and 'vertical' non-reducibility

So why would God solve our problem, to begin with? That is, why does the idea of God as the principle of aggregation of the world allow one to uphold both the unreducible unity of the world *and* the idea of the world as an aggregate of world-apart substances? The key

previous section, Feeney links Leibniz's acosmic tendency to the view that the world is an aggregate. See Feeney (2016: 146).

⁴³⁰ Along the lines of this *compatibilist* approach I would place Rutherford (2007), Rutherford (1995: 188 ff.) and Rutherford/Messina (2009) – the latter article being concerned with the problem of (in)compossibility in particular. See also Futch (2008: 143–70) and Messina (2016), who follow Rutherford. Sophisticated as it is, Rutherford's position defies easy summary, but I think that the following propositions express the core of it: (i) for there to be a (Leibnizian) world, an order of connectedness that goes beyond the mere coordination of the perceptions of world-apart substances must obtain. (ii) This order of connectedness consists in the arrangement of substances within a common causal and spatiotemporal framework. On the other hand, however, (iii) this poses no threat to the causal and spatiotemporal independence of substances *as such*: monads are themselves causally isolated, world-apart entities having no *intrinsic* spatial or temporal properties. Rather, (iv) substances are indirectly (and hence extrinsically) causally and spatiotemporally related in virtue of being correlated – via the perception of their own bodies (all finite substances are embodied substances, for Leibniz) – with bodies that are directly related in a causal and spatiotemporal way and that belong to the same world. In this way, there is a world of substances in virtue of their belonging to one, explanatory prior phenomenal world. See Rutherford (1995: 190–7), Messina (2016: 230–2). I regard my claim that the world is an aggregate unified by God as consistent with this view. As I shall argue, indeed, God aggregates substances through his perception of relations founded on (involved in) the reflexive perceptual states of the aggregated substances. As far as I can see, there is nothing in the view I shall defend that prohibits that substances perceive themselves as related to other substances, via the perception of their own bodies, in a common causally and spatiotemporally ordered framework. Besides, I think my view can help reinforce the insight, central to Rutherford's proposal (if I understood it well), that the fulfilment of the requirements for the unity of the world does not entail rejecting, or even modifying, Leibniz's strictly metaphysical conception of substance as world-apart being. If I am right to think this, then my position is not only consistent with, but also complementary to, Rutherford's view.

point that must be agreed upon is, I submit, this: the idea of substances as worlds apart applies at the level of finite substance/finite substance relations only. I take the point itself to be uncontroversial, and we have in fact met it before, so I will only quote a few representative texts⁴³¹:

Every substance is like a world apart, independent of all other things, except for God. (A VI, 4: 1550/AG 47)

[A] monad, like a soul, is, as it were, a certain world of its own, having no relationship of dependence except with God. (GP II: 436/LR 227)

[F]irst of all, it is very evident that substances depend upon God, who preserves them and who even continuously produces them by a kind of continuous emanation. (A VI, 4: 1550/AG 46)

[E]verything that happens to [a substance] is a consequence of its idea or of its being, and nothing determines it, except God alone. It is God alone who determines creatures from the outside. (A VI, 4: 1581/AG 64)

Thus, we can say that world-apart obtains at the ‘horizontal’ level of relations between finite substances, though not at the ‘vertical’ level of relations between finite substances and the infinite substance.

But let us now move to the more controversial, less obvious point. Why does Leibniz’s restriction of the independence involved in the world-apart doctrine to relations between finite substances resolve our problem? Recall first of all what exactly our problem is: if the world is an aggregate of substances, then, given that world-apart is a property of substances, MRA* applies to the world, for MRA* is a consequence of substances’ having this property. This means that the world is unified through Perceptual Reduplication and therefore that its unity reduces to the unity of the world-apart substances it comprises. However, this would in turn mean that ‘there are as many unconnected worlds as there are substances’ or that substances fail to constitute a single world. But suppose now that the world is an aggregate of substances whose principle of aggregation is God. Would MRA* and the metaphysical reductionism about aggregates that it deploys apply to the world as an aggregate? No. Why not? Because MRA* is a consequence of the conception of substance

⁴³¹ For more references, see chapters 2, section 3.4. For an earlier text not quoted there, see A VI 4: 1638.

as world apart, and that conception makes an exception for the relation holding between finite substances and God, the infinite substance. Thus, if the world has God as its principle of grouping, then its unity and reality will not reduce to the unity and reality of the radically independent substances it comprises. But aren't we then really renouncing the radical independence of substances and thereby MRA*, Perceptual Reduplication and attendant theories? I think not. What we are doing, in fact, is simply to acknowledge something that all scholars do, namely that the world-apart theory is a theory about the (in)dependence of finite substances with respect to other – all other – finite substances. So, once the role of the infinite substance in the unification of the world is acknowledged, there is *prima facie* space for the claim that there is more to the unity of the world than the unity of its constituent substances: there is a kernel of non-reducible interconnectedness anchored in substances' (metaphysically as well as morally) necessary dependence on God. And Leibniz's view of substance as world-apart being remains intact: both horns of the dilemma can be maintained.

6.3. *God's perception and the non-reducible unity of the world as an aggregate*

Now, all this may well hold in principle. But does *Leibniz* say that the world is an aggregate unified by God? As I said, to the best of my knowledge, he does not. However, Leibniz does say things that, jointly considered, can be used to support the view I am putting forward.

In a set of reflections on Temmik's *Philosophia vera theologiae et medicinae ministra*, Leibniz writes:⁴³²

- [a] In addition to the substances, which are the underlying objects, there are modifications of the substances, which are subject to creation and destruction in their own right. And finally, there are relations, which are not created in their own right but result (*resultant*) from the creation of other things. (Mugnai 155)⁴³³

⁴³² In locating some of the texts that follow (particularly [a], [b1] and [b4]) I have been helped by Mugnai (2012: 205–8), to whom I also owe the translations. I am also indebted to him with respect to some interpretative points (if I got him right).

⁴³³ Translation in Mugnai (2012: 205).

Apart from the references to creation, Leibniz's remarks in this text seem to add nothing significantly new to the picture of relations with which we are already familiar. God creates substances and their modifications. Relations, by contrast, are mere 'results', entities founded on substances' intrinsic properties (their non-relational perceptual states) the reality of which wholly reduces to, and is exhausted by, the reality of those properties (the foundations). Immediately afterwards, however, Leibniz seems to move in the direction of a somewhat different picture:⁴³⁴

[b1] Their reality (*realitatem*) [of relations] does not depend on our understanding – they inhere without anyone being required to think of them. Their reality comes from the divine understanding (*intellectu divino*), without which nothing would be true. Thus there are two things which only the divine understanding can realize (*realisantur*): all the eternal truths and, of the contingent ones, those which are relational. (Mugnai 155)⁴³⁵

Several passages like these occur in other writings:

[b2] [A]lthough relations are the work of the understanding they are not baseless and unreal. For (*car*) the primordial understanding is the source of things. (NE 145)⁴³⁶

[b3] Moreover, God not only considers single monads and the modifications of any monad whatsoever, but he also sees (*videt*) their relations, and the reality of relations and truths consists in this. (GP II: 438/LR 233)⁴³⁷

[b4] In a certain sense (*aliquo modo*), a relation may be defined as an *ens rationis*, which yet is real at the same time (*etsi simul reale sit*): all things in fact are constituted (*constituuntur*) by virtue of the divine understanding.⁴³⁸

⁴³⁴ Attention to [a] and [b1], and more particularly to the (at least ostensible) contrast between them, has been drawn by Mugnai (2012: 205–6).

⁴³⁵ Translation in Mugnai (2012: 206). That eternal truths are 'realized' by God's understanding might seem to be contravened by Leibniz's well-known rejection of the Cartesian thesis that God creates eternal truths. See e.g. *Mon* § 46 (GP VI: 614). As Mugnai explains, however, the idea here seems to be that the divine understanding is 'a kind of ontological support' of eternal truths (2012: 206–7). Thus interpreted, the passage tracks Leibniz's important argument for the existence of God from the reality of eternal truths. See *Mon* § 44 (GP VI: 614).

⁴³⁶ Remnant and Bennett's translation modified. See n. 439.

⁴³⁷ This passage comes from a study for one of Leibniz's letter to Des Bosses (15 February 1712).

⁴³⁸ LH IV, 3, 5c, Bl. 2r (reference and translation in Mugnai [2012: 207]). See also NE 227: 'Relations and orderings are to some extent "beings of reason", although they have their foundations in things; for one can say that their reality, like that of eternal truths and of possibilities, comes from the supreme reason'. NE 265: 'The reality of relations is dependent on mind, as is that of truth; but they do not depend on the human mind, as there is a supreme intelligence which determines them from all time'. Mugnai 161: 'I trace the reality of each relation to a relationship with the divine understanding' (translation in Mugnai [2012: 207]).

There are two complementary points about these passages to which I would like to draw attention:

(i) The first is that they confirm that, as seen earlier, there is a level of analysis at which Leibniz is willing to accept that relations are real. This is the case when substances are put in relation to the infinite substance. Thus, as we read in [b2], it is because of (*car*) their grounding on the ‘primordial understanding’ that relations are not ‘unreal’ (*ne sont pas sans...réalité*).⁴³⁹

(ii) But more than this can be extracted from texts [b1]–[b4]. Reconsider [b3]. In it, Leibniz begins by saying that God sees (*videt*) – that is, perceives through his understanding or by ‘intellectual intuition’ – not only substances and their modes but also their relations. Then he adds that the ‘reality [of relations] consists in this’, that is, I take it, in their being seen or perceived by God. The same idea is suggested by [b1], where we read that relations are ‘realized’ (*realisantur*) by the divine understanding, and by [b4], where relations are said to be ‘constituted’ (*constituuntur*) by virtue of the divine understanding’. If these ideas are taken together, I think the following view can be attributed to Leibniz. First,

(1) God perceives substances, modes and, in them, their relations [(b3)];

second, by virtue of this,

(2) substances’ relations are constituted or realised ([b1], [b3],[b4]);

third, in this way,

(3) relations are something real ([b1]–[b4]).

Now, if I am right to think that (1)–(3) express the view encapsulated in [b1]–[b4], then an important question arises. How could God see relations *in* substances and their modes *and* at the same time constitute them, thereby turning them, as it were, into

⁴³⁹ Remnant and Bennett omit the (causal) conjunction ‘*car*’ at the beginning of the second sentence. It is clearly important, in my opinion, since it establishes an explanatory link between things’ relations to the ‘*premier entendement*’ and the fact that relations ‘*ne sont pas sans fondement et réalité*’.

something real? That is, if, as (1) states, God sees relations in substances and their modes, wouldn't the relations already be 'there', i.e. in the contemplated substances? If so, why would God constitute or realise, as (2)–(3) suggest, the reality of relations?

In nuce, the answer to these questions is already implicit in the first point I noted about the passages we are surveying. The point, to be clear, was that there are two levels of analyses on which relations can be considered, the finite/finite substance level on the one hand, and, on the other, the finite/infinite substance(s) level. Let us call the relations on each of these levels 'R1-' and 'R2-relations', respectively. R1-relations are subject to strong reductionism: they are mere results whose reality is exhausted by the reality of the intrinsic, qualitative perceptions of the world-apart substances in which they are founded. R2-relations, by contrast, are not. On this basis, what I propose is this. *R1-relations* are the relations that, according to (1), God sees or perceives in the contemplated substances and their modes. As he does so, however, there is a *further* relation over and above the perceived R1-relations, namely *God's very act of perceiving* them. This relation is, of course, an R2-relation, which, as such, has a non-reducible status. And *this* perceiving relation is what according to (2) God constitutes or realises. I think this reading provides us with a plausible explanation – or at least with one plausible explanation – of why Leibniz can (consistently, in my opinion) maintain that, as we read in [a], *only* substances and their modes are created by God 'in their own right' *and* that, as he suggests in [b1] and [b4], God constitutes relations. For why would he need to constitute something whose reality is fully involved, as a resultant consequence, in his creation of substances and their modes, the only things that are created in their own right? No problem arises, however, if the relations God sees in substances and their modes and the relations he constitutes are taken to stand for two distinct referents – namely R1- and R2-relations, respectively.

But how, one might ask at this point, does all this relate to the claim that God is the principle of aggregation of the world? Well, in a very exact way. Consider how Leibniz explains the act of aggregation in one of his letters to Arnauld:

Our mind notices or conceives some genuine substances that have certain modes. These modes contain the relations (*enveloppent des rapports*) to other substances. From this the

mind takes the occasion to join them together in thought (*joindre ensemble dans la pensée*).
(A II, 2: 191/LA 126)⁴⁴⁰

This is precisely what God does with all substances if my reading of [a]–[b4] is accepted.⁴⁴¹ First, God perceives ‘genuine substances that have certain modes’ – the ‘single substances and their modes’ of [b3] – and, in them, the relations that are contained (i.e. founded) in the modes – R1-relations, as I have argued. On this basis, secondly, he puts substances together in his representation. In other words, he aggregates them. The phrase ‘on this basis’ is important. The aggregation of substances in God’s single representation is not an arbitrary act on God’s part but one based on what he contemplates in – and thus on what is pre-established in – the internal structure of the perceived substances.

It might be objected that the idea, integral to aggregation, that God unifies substances in his representation is not actually part of my interpretation of [a]–[b4] above. For that interpretation – or so the objection goes – is limited to the claims, first, that there are R1-relations in substances and, second, that God perceives them. I think, however, that, when it comes to God’s infinite mind, the perception of relations in substances *brings with it* the perfect representation of all substances. For the relations that God perceives in a substance involve as termini all the substances that belong to that substance’s world. Thus, immediately after saying, in [b3], that God sees relations in substances and that the reality of relations consists in their being seen by God, Leibniz adds that, this being the case, ‘truths about the *whole* (*de toto*) can be affirmed, which are certainly valid in God’s mind’ (GP II: 438/LR 232–3).⁴⁴² That is, when God perceives a substance *a*, he automatically, so to speak, represents all the substances belonging to its world – say *b* and *c*. Thus, in perceiving the information encoded in *a*, God’s represents *a* alongside *b* and *c* – forms an aggregate of *a*, *b* and *c* – the latter two being part of that information.

But here comes another objection. The very substance *a* that God perceives *also* represents substances *b* and *c*: that is precisely what explains that, in perceiving *a*, God also represents *b* and *c*. Doesn’t this mean that *a*’s world is *already* constituted independently of

⁴⁴⁰ I have modified Mason’s translation following Adams (1994: 246). See also A VI, 4: 998 and GP II: 256, where similar accounts of aggregation are presented.

⁴⁴¹ Or, more precisely, with all the substances within each of the infinitely many sets of compossible substances that God contemplates, if we are talking of possible worlds.

⁴⁴² LR’s translation slightly modified following Brown (1987: 204).

God's perceiving *a* and, in it, *b* and *c*? If so, isn't God's role as world-unifier redundant and hence unnecessary?

Well, *in a sense*, *a*'s world *is* already involved in its own intrinsic states, regardless of God's perceiving act. To use well-known Leibnizian expressions, each substance is a 'concentration' or 'mirror' of its universe (GP VII: 411, GP IV: 542) and, as we have seen, it is 'on the basis' of what God sees in substances themselves that he is able to represent their universe. But this does not render God's unifying act redundant, for two reasons. (i) First, according to Leibniz, only God has a perfectly unified representation of the world as a whole. Unlike finite substances, which perceive the universe as in 'a drawing in perspective', God sees things as 'in a ground plan or geometrical representation'. Consequently, as Leibniz puts it, God's representation of the universe is '*unique*' (*unica*), whereas those of finite substances 'differ according to the position of the viewer' (GP II: 438/LR 233).⁴⁴³ This being the case, it is only under the presupposition that God is the being whose perception unifies the world that each member of the world can belong to the world as much as any other member of that world.⁴⁴⁴

(ii) Second – and more importantly for present purposes: the world involved in *a* has, or so runs my proposal, a *different ontological status* from the one God represents while perceiving *a*. That *a* involves its world means that it expresses *b* and *c* in its intrinsic perceptual states, the foundation of its relation to *b* and *c*. In this case, then, we are dealing with relations between *finite* substances – what I called R1-relations. But, as should be clear, R1-relations are subject to strong reductionism. This means that the world involved in *a* fully reduces to its intrinsic perceptual states. And so, once again, we are thrown back to world-apart, MRA* and Perception Reduplication: the world involved in *a* has no unity and reality over and above the unity and reality of *a* itself. None of this holds for the world that God represents while perceiving *a*, however. True, the world as it is involved in *a* and the world as it is represented by God while perceiving *a* contains the same members – *a*, *b* and *c*. But God's representing *b* and *c* while perceiving *a* is an R2-relation: it involves God

⁴⁴³ See also A VI, 4: 1668; GP VI: 329; A VI, 4: 1549 (*DM* § 14). Both in *DM* § 14 and GP II: 438 Leibniz's concern is with God's perception of the universe of bodies and phenomena. See A VI, 4: 1549, 20: 'le systeme general des phenomenes'. This, I think, lends support to Rutherford's view sketched above. See n. 430.

⁴⁴⁴ Thus, I think we can say that the role of God with respect to the world is analogous to that of a dominant monad with respect to its organic body, with the key difference that God is external to the world, whereas a dominant monad is internal to the body it aggregates. A summary presentation of Leibniz's complex doctrine of monadic domination can be found in Antognazza (2016a: 103–4). See also Look (2002) and Duarte (2012).

himself, who is an infinite substance. It follows from this that, unlike the world as it is involved in *a*, the world as it is represented by God while perceiving *a* has a non-reducible ontological status. And this means that, understood as the object of God's perceiving activity, *a*'s world has more unity and reality than the unity and reality of *a* itself, namely the non-reducible unity and reality bestowed on *a*'s world by God's perfectly unified representation of it. Put differently, God's mind thinking *a*, *b* and *c* together constitutes inter-substance relations, i.e. real (non-reducible) inter-substance relations resulting from God thinking together *a*, *b* and *c*. The familiar thesis that, for Leibniz, there are no inter-substance relations holds thus only if consideration is restricted to finite substances without taking God into account. If God is taken into account, there is a sense in which inter-substance relations are real relations. In sum, and to phrase the idea more generally, we can conclude two things. First, when God perceives substances, by the very same act of perceiving them and on the basis of what he sees in their internal structures, he perceives all the other substances in their world, that is, he aggregates them. Secondly, the unity and reality of the resulting aggregate, though relational, does not reduce to the unity and reality of the perceived substances. This is because this aggregate – the world – is unified by the perceiving power of an infinite substance, which is not subject to the full reducibility of relations to the internal states of finite substances.

Concluding Remarks

This dissertation has been modest in scope. No attempt has been made to cover all that is relevant to Leibniz's pre-established harmony. More narrowly, we have concentrated on Leibniz's theory insofar as it provides an explanation for the unity of all substances and thus for their belonging to a single world. After arguing for a formulation of pre-established harmony as consisting of seven components (ch. 1), I have developed specific ways in which these components relate to a number of tenets pertaining to the more markedly logical side of Leibniz's metaphysics (ch. 2), his philosophical theology (chs. 3–5) and his philosophy of nature (chs. 5). Further, I have offered and motivated an interpretation of pre-established harmony, according to which this theory can be seen as an extension of Leibniz's conception of the unity and reality of bodies as aggregates (ch. 5). Unlike bodies as aggregates, however, I have also argued that the world as an aggregate has the specific characteristic of being unified and realised by the perceptual power of God. This, I have explained, permits one to retain all the basic elements of Leibniz's metaphysics of world-apart, radically independent self-perceiving substances, while allowing the world to have a unity and reality which, though relational, do not reduce to the unity and reality of such substances.

I shall not sum up here all the arguments and specific theses I have presented in the preceding chapters. Instead, I would like to conclude by briefly developing a historical point. This will allow me to underscore, or so I hope, the interest of some general features of the interpretation I have defended in chapter 5, as well as signalling some topics for future research.

From about 1740 to 1760, German intellectual life was dominated by a series of controversies growing out of the encounter between Leibnizian metaphysics and Newtonian science.⁴⁴⁵ The theory of pre-established harmony was a recurrent target of Newtonian critics. Briefly put, their objection was this. Every doctrine contrary to the truths of mechanics is false. The principle of inertia is a truth of mechanics. Yet, the pre-established harmony contradicts this principle. For, according to that theory, finite substances do not interact, all their states being only the result of their own intrinsically determining causal

⁴⁴⁵ See Calinger (1968) and (1969) for more details. See also Broman (2012).

powers. But, according to the principle of inertia, bodies cannot change in their states unless they are interconnected in a system of externally impressed forces. Thus, in a universe of causally isolated entities, bodies can do no more than preserve the very same state in which they were created. Therefore, the pre-established harmony is false. Positively, physical influx is true.⁴⁴⁶

Does this objection threaten Leibniz's pre-established harmony? I think not. For a conflict between theories to arise, they must be situated at the same explanatory level. On the view I have defended, however, Leibniz's theory of pre-established harmony is not intended to explain the full range of empirically observable effects that configure our daily experience, as Newton's laws do.⁴⁴⁷ Rather, it is primarily offered as a response to a metaphysical question: how it is that the world, though comprising a plurality of non-interacting substances, can nevertheless be one unified world? In connection with this, it is interesting to note that in more than one passage Leibniz explicitly restricts the scope of his pre-established harmony to the strictly metaphysical domain of substances, leaving open the possibility of interaction at the mechanical level of bodies. He writes in *NS* § 17:

It is true that we can easily understand in connection with matter both the emission and the receiving of parts, by means of which we quite properly explain all the phenomena of physics mechanically. But a material mass is not a substance, and so it is clear that action as regard an actual substance can only be explained as I have described [*sc.* in terms of the pre-established harmony]. (GP IV: 486/WF 20)

Likewise, we read in a letter to De Volder that

[the primitive entelechy] cannot influence other entelechies and substances, even those existing in the same mass. But in the phenomena, i.e. in the resulting aggregate, everything

⁴⁴⁶ This line of objection is developed, for example, by Euler in his *Réflexions sur l'espace et le temps* (1748). For a more detailed assessment of Euler's case against pre-established harmony, see Laywine (1993: 27–31) and Robert (2011).

⁴⁴⁷ It should be highlighted here that this applies to *Leibniz's* pre-established harmony in particular. I have argued elsewhere that the Newtonians' attack effectively undermines the version of pre-established harmony defended by some of Leibniz's followers, particularly Christian Wolff. And this is precisely because, unlike Leibniz's, Wolff's simples are not metaphysical principles of explanation, but rather physical points whose explanatory role reaches the actual order of spatiotemporal appearances. See Robert (2018). On Wolff's 'physicalisation' of monads, see Corr (1974), Corr (1975), École (1964) and, more recently, Rutherford (2004) and Watkins (2006). On the decline of the pre-established harmony and emergence of physical influx in eighteenth-century Germany, see Watkins (1998).

is indeed explained mechanically, and masses are understood to impel (*impellere*) one another. (GP II: 250/LV 261)⁴⁴⁸

Thus, the theory of pre-established harmony should not be seen as competing with, but rather as complementing, the laws of mechanics. As the very perceiving unities which provide the metaphysical grounding for the unity and reality of bodies as aggregates, the pre-established harmony belongs to the sphere of metaphysics.⁴⁴⁹

Support for this claim can be found in a rather unexpected place. Allow me to close by commenting on a text:

Finite substances do not, in virtue of their existence alone, stand in a relationship with each other, nor are they linked together by an interaction (*commercio*) at all, except insofar as the common principle of their existence, namely the divine intellect, maintains them in a state of harmony in their reciprocal relations. (Ak I: 413/WM 40)

This is Kant's 'principle of coexistence', formulated in Proposition XIII of his *Nova Dilucidatio* of 1755. In short, the principle states that God – the 'divine intellect' or 'scheme of the divine understanding (*intellectus divini schema*)' (Ak I: 413, 17) – is necessary for substances to stand in interaction. On Kant's view, then, only God can link substances together in a single world. In advancing this principle, Kant allies himself with those Newtonian critics who advocated physical influx and opposed pre-established harmony.⁴⁵⁰ Thus, in one of the 'applications' of the principle, Kant clarifies that the kind of interaction is arguing for is in fact 'Newtonian attraction or universal gravity' (Ak I: 415). Unlike many of his Newtonian fellows, however, Kant was well aware that, as the theory of substance underlying it, Leibniz's pre-established harmony is a strictly metaphysical theory. Consequently, a simple reference to the truths of mechanics is not enough to refute it. Indeed, Kant thinks that one of the virtues of his principle is that it

⁴⁴⁸ See also GP VI: 607. The claim that there is interaction at the level of bodies is, I think, consistent with the view, stated elsewhere, that bodily motion can be explained by reference to bodies' own intrinsic elastic force. See A VI, 4: 1980; A VI, 4: 1647; A VI, 4: 1638; GM VI: 492. Bodily collision does not entail that forces are 'transmitted' from one body to another. See esp. A VI, 4: 1620. Accordingly, it does not entail any variation in the overall quantity of force. In any case, I register here that some scholars deny that there can be body-body interaction for Leibniz. See e.g. Brown (1992). Yet others believe that there is. See e.g. Miller (1988).

⁴⁴⁹ For a comprehensive defence of the compatibility between Leibnizian metaphysics and mechanical science, see Antognazza (2016b).

⁴⁵⁰ For Kant's principle of coexistence as a criticism of pre-established harmony, see Langton (1998: 107–23), Friedman (1992: 6–8). But see below for some qualifications.

overcomes a difficulty which had infected all the versions of physical influx prior to his. This ‘πρωτον ψευδος’ – as Kant calls it in a later pre-critical work – of the ‘vulgar version of the theory of physical influence’ consists precisely in its failure to ‘reveal the origin (*originem*) itself of the reciprocal connection of things’ and thus to provide the metaphysical foundation for the unity of the world (Ak I: 416–7/WM 44–5; cf. Ak II: 407).

Insofar as it reveals such a foundation, Kant thinks that his enhanced, ‘superior’ (Ak I: 416) version of physical influx provides him with a theory worthy of its rival – the pre-established harmony. Yet we may wonder whether, in the end, Kant is not really making an important concession to Leibniz. I have argued that, for Leibniz, the principle of the (relational, aggregative) unity and reality of the world is God’s representational power. Kant agrees: ‘the reciprocal connection of substances requires that there should be, in the effective representation of the divine intellect, a scheme conceived in terms of relations’ (Ak I: 414/WM 42).⁴⁵¹ But there is more. For, as Kant sees things, the *reason* God is required for substances to be connected is precisely that, considered in themselves, substances are metaphysically isolated beings.⁴⁵² As he puts it in a work from the same period, ‘a substance is a self-subsistent (*selbständige*) entity which contains within itself the total source of its own determinations (*vollständige Quelle aller seiner Bestimmungen in sich enthält*)’ (Ak I: 21–2). Eric Watkins (2005: 142–3) and Alison Laywine (1993: 38) have pointed out the similarity between Kant’s claims in these writings and Leibniz’s conception of substance. It is hard not to be sympathetic. Indeed, in this context, Kant goes as far as to say that, given the ontological isolation of substances (*qua* substances), it is a metaphysical possibility that there be as many worlds as there are substances or that there be only one substance in the universe.⁴⁵³ This could have been lifted *verbatim* from a Leibnizian writing. So, putting all this together, and if the interpretation I have put forward in the last chapter is on the right track, it is clear that the pattern of reasoning underlying Kant’s principle of coexistence is essentially Leibnizian: when one is dealing with the

⁴⁵¹ The description of God’s representation as ‘effective’ (*in efficace representatione*) tracks Kant’s view that, when applied to the actual world, the scheme of the divine understanding consists in God’s continual creation: ‘The schema of the divine understanding, the origin of existences, is an enduring act (it is called preservation)’ (Ak I: 414/WM 42). This has a striking similarity with Leibniz’s position in *DM* § 14, where he connects the idea that God ‘turns on all sides and in all ways the general system of phenomena’ (i.e., he perceives the world as a whole) with the doctrine that God ‘preserves [substances] and...even produces them continually by a kind of emanation, as we produce our thoughts’. See A VI, 4: 1549/AG 46.

⁴⁵² See Ak I: 413 (‘Elucidation’).

⁴⁵³ See Vogel (1975: 125–6) and Edwards (2000: 74) for a development of these points.

problem of the metaphysical foundation for the unity of the world, there is no choice but to refer to God, the only substance on which finite substances depend. But if this is so, then it seems that, when one is dealing with *this* problem, there is no choice but to affirm, with Leibniz and *pace* Kant, that the *commercium* between substances is ultimately *pre-established*: it ‘arises (*oriri*) not from an influx, but through an agreement derived from divine preformation’ (GP IV: 510/AG 161).⁴⁵⁴ But the elaboration and discussion of this line of inquiry must be left for another occasion.

⁴⁵⁴ Occasionalism might, in principle, be another possibility, but Kant rejects it. See e.g. Ak I: 415.

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